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An Address.¹

By T. A. PRICE, M.B., Ch.B. (Edin.), D.P.H.,
Incoming President of the Queensland Branch of the British Medical Association.

It is now my duty to deliver the presidential address.

There is one important subject to which I have given considerable time and thought, and in which I have had some years of practical experience, and this is fly and mosquito control from the standpoint of the local authority. On this I wish to give you the result of my experience with the Toowoomba City Council, together with some general observations on the importance of the representation of the medical profession on all important governing bodies.

The weakness of organized medicine today in dealing with the various bodies of men that govern

this Commonwealth is the fact that on those governing bodies it is rare to find a medical man as a full member with authority and a vote. Be it the Federal Government or the smallest local government authority, medical men are rarely members. Paid medical officers there are who advise these bodies, and many of them are very able men, but their work is made difficult by the fact that they have to deal with lay authorities who frequently do not understand the situation; often they have to carry out policies with which they do not agree.

I have noticed that it generally happens that a member of the legal fraternity manages to be chief of the Justice Department in State and Federal Parliaments, but in medicine, architecture, engineering, railways and education it is seldom that men of the requisite training and experience are available. Consequently momentous decisions regarding policy and important technical decisions in which vast sums of money are at stake lie frequently with men who really know little about the matters that are dealt with by

¹ Delivered at the annual meeting of the Queensland Branch of the British Medical Association on December 8, 1933.

their departments. Fortunately the permanent officials are there, and they usually, but not always, prevent serious mistakes. One way of remedying this state of affairs, as far as medicine is concerned, is for suitable medical men to win positions on these governing bodies, and one of the most important bodies to influence is the local governing council, both in the city and in the country. In passing I may relate an incident referring to an important department—an incident that came within my own knowledge.

A certain distinguished educational authority was visiting Australia to study our systems of education. In speaking of his experience in one of the States, he remarked: "The Minister was very kind. He placed a car at my disposal and gave me free railway passes and offered me every facility to see all I wished to see, but of course he knows nothing about education"; yet this man thought he knew a great deal and guided the educational policy of a great State.

My personal experience of local authority work lasted for about ten years, during which term I was an alderman of the Toowoomba City Council (1912 to 1921). We all know the difficulty the Queensland Branch of the British Medical Association has had in trying to convince the Brisbane City Council of the importance of appointing a whole time medical officer of health who has had the requisite training and experience. Had there been one or two suitable medical men as aldermen on the City Council, then in all probability there would have been no need to act, the appointment would have been made long ago.

Then take the matter of hospital boards: It is important that experienced medical men should be on these boards; but the only qualification for membership of a hospital board seems to be that the members should know nothing about medicine. If there were medical men who were aldermen, most councils would appoint them as representatives on hospital boards, and the difficulty would be overcome. The success and reasonableness of this policy would insure its continuance.

For local government purposes Queensland is divided into a number of areas which are governed by City, town and shire councils; these councils are elected every three years. To obtain a seat on a local authority council it is necessary to reside in the area and to be nominated by a certain number of electors and to fight for, and win, a seat.

This work does not appeal to many medical practitioners, but it is important work, and there should be men amongst us who are willing and able to do it.

As regards the actual work of the local authorities it may be summarized in the slogan: "A healthy, convenient and beautiful city and countryside".

The strenuous election campaigns that took place during the ten years I was an alderman were among the most valuable sections of the work done, because public interest was aroused and many of the citizens became enthusiastic for public health work, especially for mosquito and fly control.

At the time I joined the Toowoomba City Council in 1912 life in summer was rendered miserable by reason of the presence of myriads of mosquitoes, the pest increasing every year. Typhoid fever was

all too prevalent. I found that the work of helping to carry out these public health reforms was not so easy as it looked from outside the Council.

In the first place, most of the aldermen did not believe in public health reform; good solid men in their own lines, they were quite satisfied with things as they were; they were used to mosquitoes and flies, and did not believe it possible to get rid of them.

I remember one alderman, who had many very good qualities, remarking when I was speaking about the insanitary closets: "But, Doctor, you know I think you are a bit fussy—I always associate a certain amount of stink with these places".

In the second place, there was no law or regulation whereby mosquito control measures could be enforced.

In the third place, Toowoomba was divided into seven different local authorities: the city of Toowoomba with its City Council, the town of Newtown, and five shires—seven different local governing bodies in one small community. This meant that the City Council could deal with only part of Toowoomba. A special Board had to be created to deal with the whole area. To convince my fellow aldermen was now my job; but to get regulations issued and laws passed and to create a Special Mosquito Board and afterwards to alter the boundaries of the city to include the whole of the community, was the work of the Home Office. And here I want to pay a tribute to the Home Secretary's Department. I had dealings with it through several changes of Government, and it was only the help that that Department gave which made it possible to carry out the work done in Toowoomba; and not only that, but throughout Queensland the Home Office has gradually done away with the unnatural subdivision that used to divide so many communities, and has made one local authority for one natural community. In this the Home Office has done a great work and has made public health work and town planning schemes very much easier to carry out.

Good public health work in the direction of fly and mosquito control means a sound policy, a sound programme, and hard work wisely directed. The actual work is ordinary and commonplace. The health inspector must visit individual backyards; individual closets must be made fly-proof; individual tanks must be screened and individual swamps sprayed and drained. This same principle applies to all spheres of human activity. In the ordinary practice of medicine the sound practitioner is not made merely by the use of all the latest and most complicated ancillary helps to diagnosis, but by careful examination of individual patients and the taking of complete histories. So in public health work there may be good policies and extensive departments and laboratories and voluminous reports, but what counts is the actual work done.

Take tropical medicine, for instance: there may be a splendid organization labelled "The Department of Tropical Medicine" with plenty of officials and annual reports, but if no actual work is being done on individual cases of tropical disease, the whole thing is useless.

There is another aspect of the matter, a purely personal one, and that is the importance of public health to us personally and to our own families.

We are stung by the mosquitoes and are subject to infection by preventable diseases. I had one of the most miserable times of my life in 1904 in Toowoomba caused by dengue fever, so it comes home to us personally; and this aspect of it appealed strongly to me when I decided to lend a hand at local authority work in Toowoomba.

One pleasing feature of the local authority work was the warm approval I received from some of my fellow practitioners. I think they did a great deal towards making the campaign a success by their quiet support among their friends and patients. I always received the same encouragement from the British Medical Association officials whom I met from time to time in Brisbane.

Fly-Proofing the Earth Closets.

The greater part of Queensland still has, and for years to come will have, an earth-closet system. It is important that flies should have no access to the pan contents. To effect this in Toowoomba the Council adopted a fly-proof pedestal costing about thirty-five shillings. These were gradually installed in all the closets, with a corresponding decrease in the incidence of typhoid fever and fly-borne diseases. It is no doubt better to have a fly-proof closet as well, but this was too expensive. The amount spent by the City Council for the treatment of infectious diseases has been about £500 a year less since this policy was adopted. The annual number of typhoid fever cases has fallen from fifty-four to about five.

I have no wide knowledge of the conditions existing in the unsewered portion of Brisbane and in the country towns of Queensland other than Toowoomba, but from what I do know, too little attention is given to the cleanliness and fly-proofing of earth closets. In Toowoomba there was not much opposition to the installation of fly-proof pedestals. A few photographs of some dilapidated structures, when screened, were very convincing during election time.

Mosquito Control.

The mosquito campaign was very interesting. In 1912 when I entered the City Council, mosquitoes were prevalent and had been very prevalent every summer, but no one believed that they could be controlled.

Ronald Ross might not have lived for all that was known of his great work. When I began to speak about mosquito control, it was considered a joke, even people otherwise well-educated believed that mosquitoes bred in grass and trees. I used all possible occasions to educate the public: the best means I found to be lantern lectures. I got tank slides showing larvæ. I poured oil on the water and showed the larvæ dying. I gave them statistics of what had been done at Port Said, Ismalia and the Panama Canal, and gradually got a following among the more thoughtful. The great fear of the other aldermen and of many citizens was that all this "fancy health work" meant money and higher rates; but after four years (1916) the Council consented to have a mosquito survey made, the cost not to exceed £10. The State Health Department sent up Mr. Cooling, who made a rapid survey at a cost of £7/10/-.

Later on in 1916 the Mosquito Board was formed and I was appointed chairman. At the first meeting one of the most experienced aldermen present suggested that we should suspend operations till the War was over, and he had many sympathizers, but the law now said that mosquito control was the duty of the local authority, and I persuaded them to go ahead because there was a War on, and we wanted to keep the people fit. A good inspector was appointed, also an assistant, whose duty it was to spray the east and west swamps. The inspector started a house to house inspection. I sent him to my own house first, and then to those of the Mayor and aldermen, and then to systematic work, section by section of the town.

I had called a meeting of the master plumbers, and asked them to submit designs for a tank screen to conform with the regulations. A particular design was adopted and made compulsory. I mention this because I found that in the first campaign in Brisbane too fine a mesh of wire gauze had often been used. This readily silted up and no water went into the tank. The angry owner, finding the tank empty after a shower of rain, put a poker through the gauze. Even with the widest possible mesh that we adopted in Toowoomba it tended to get blocked, especially in the centre of the town, where the dust on the streets blew on the roofs and was washed into the tank screen. Hence frequent inspection was necessary.

Many people objected to screening their tanks, and it was necessary to summons them, thus causing a lot of extra work and unpleasantness. There are people in Toowoomba today who refuse to consult me as a medical man because I summonsed them in 1916 and made them screen their tanks. But the work went on, and what with the elimination of the east and west swamps breeding-grounds by spraying, the section of the people whose tanks were screened felt some benefit, and more people began to believe in the campaign, though many enemies were made. But after six months' work a very serious and unfortunate situation arose. Only a small section of the city had been covered; a large part of the city had received no benefit, and at this stage the City of Greater Toowoomba was gazetted. This involved an election of the whole Council, and I had to face the electors with the work only begun and many citizens angry because they had been obliged to incur the expense of screening their tanks, without immediately receiving any benefit therefrom.

There were twenty-six candidates for eleven seats. There were a Labour team, a Nationalist team and several independents, including myself. In passing, let me emphasize the pernicious influence of party politics on such an important matter as public health.

In spite of six months' work, mosquitoes were still prevalent in most places. Both parties laughed at the mosquito campaign and dubbed me the "Mosquito King". However, mosquito control had some very strong supporters, especially among the more intelligent citizens, while some of my medical friends were quietly supporting the campaign. However, it needed very strenuous work and many popular lectures to win. Defeat at this election meant the end of mosquito control work in Toowoomba.

You may not remember that mosquito control was started in Brisbane years before it began in Toowoomba—I think under the State Health Department—and later on the local authorities (there were nineteen then in Brisbane) turned it down. It was started again in the Greater Brisbane Council in 1926. Good solid work was done for some years, but at present the so-called mosquito control campaign has almost been abandoned. There has been no prosecution of defaulters for years; the staff has almost disappeared. It is true there is an able entomologist and an office in the Town Hall, but little else, except the mosquitoes. Years of good work are being wasted, trained men have been thrown into unemployment; it is impossible to imagine any other reason for this than false economy and a total inability on the part of the Council to grasp the importance of the work.

This 1917 election was so important from a public health standpoint as far as Toowoomba was concerned, that I do not apologise for describing the methods used to win.

A vote taken six weeks before the election probably would have placed me last and would have been taken as the defeat of the mosquito control campaign. I used the screen of the picture theatres to show a number of slogans such as "Typhoid and Dengue are more costly than Fly and Mosquito Control". One of the moving picture theatres loaned me a moving picture of the blow-fly in all its stages, and ran it for me at my meetings in the Town Hall. I had tank slides showing living mosquito larvae got from different premises by my enthusiastic inspector, and I had a lot of local slides made of tumble-down closets, dirty backyards, and some slides of beautifully kept homes and tidy backyards, and also many town-planning slides showing what other countries were doing.

It was a busy six weeks campaign. Local authority election meetings are usually dull affairs and poorly attended, but the lantern slides and the enthusiasm of a few supporters, together with the zeal of many enemies, gave me large audiences. A great many of those who came to give me a bad time left the meetings as warm advocates to vote for these public health measures. The result was that when the votes were counted, instead of being bottom of the list of twenty-six candidates, I was well up towards the top of the poll. This convinced the Council that mosquito control was now popular and would not lose votes; but most of the aldermen had their own ideas about carrying out the work.

The very efficient inspector was altogether too drastic for some of the aldermen, and after a hard struggle I lost him; the Council appointed a willing, but quite inexperienced, man whom I had to train. The Mosquito Board had been abolished, and the Council had undertaken the work. It was very disappointing. I had now no power to summons defaulters. I was only Chairman of the Health Committee. The Mayor alone had the power to summons. I very nearly threw it all up at that time, it seemed so hopeless; but I held on till the next year, 1918, when I got just enough support to be elected Mayor.

Now I could summons the defaulters, and I did it freely. There were minor difficulties to meet from time to time; but the people believed in health work now, and the work had gone on steadily, though perhaps not perfectly, ever since. A man who advocates dropping mosquito and fly control in Toowoomba would have no chance of being elected to the Council. The work at present is good, but not as good as it would be if the chief inspector had more assistants. The number of inspectors is too few, and they cannot inspect premises frequently enough; but directly mosquitoes manifest themselves, people ring up the Town Hall, and the inspector usually finds larvae in their backyard or in that of their next-door neighbours. Many people, including myself, have not used mosquito nets for ten years or more.

The first Brisbane Mosquito Control Campaign broke down because on the controlling local authorities there were not sufficient men who knew of its extreme importance and its practical possibility. If there had been, Brisbane would be at present a very different residential place in summer as far as mosquitoes are concerned. The remedy is not to impose an outside authority on the community and to do the work against the will of the local governing body, but to educate the people and to get men on the local authority who understand what public health work stands for and how it can be carried out. I think that there are members of our Association who can do this work; will they? It means a good deal of time, thought and trouble, and will not increase a man's practice. But if you enjoy a fight and have a sense of humour, if you do not worry when you are called all sorts of ugly names or receive threatening letters (from one fanatic I even received a letter threatening my life); if you can smile when unworthy motives are attributed to your public work, then it is well worth while. It is a means of self-realization and self-expression that repays many many times all that you put into it. There are a few men in all callings today who have intelligence and ability to lead and to organize, but who are devoting their lives to making more and more money—they work hard overtime—while young men of promise are idle. These men are wanted in State and Federal Governments and on local authority councils before they are too old and set. We should supply our quota from medicine.

Osler, in discussing the difficult first five years after graduation, says:

I wish the custom of taking junior men as partners and assistants would grow on this Continent. It has become a necessity, and no man in large general practice can do his work efficiently without skilled help. How incalculably better for the seniors, how beneficial to the patients, how helpful in every way if each one of you for the first five or ten years was associated with an older practitioner, doing his nightwork, his laboratory work, his chores of all sorts. You would in this way escape the chilling and killing isolation of the early years, and amid congenial surroundings you would in time develop into that flower of our calling, the cultivated general practitioner.

Sir Ronald Ross, in his Huxley Lecture in 1914, said:

We now have a great sanitary ideal put before us—so to manage our habitations, villages, towns, and cities that the vermin in them shall be reduced to the lowest possible figure: it demands only intelligence, energy and organization on the part of administrators—unfortunately these qualities are not

always forthcoming and administration often lags years behind the dictates of science. When I had completed my work in 1899 I fondly dreamed that a few years would see the almost complete banishment of malaria from the tropics—that those benign climes and those beautiful scenes would be almost rid at once of a scourge which has blighted them from time immemorial. In this I have been disappointed—but it is not the fault of science that we do not utilize the gifts she gives us.

Nearly forty years have passed since the Manson-Ross discoveries, yet, contrary to the general belief, the total number of sufferers from malaria throughout the world has increased.

Ronald Ross, like so many pioneers in science, did not seem to realize that it was his enthusiasm that enabled him to endure through all the years of toil and failure till he ultimately succeeded. He expected the world immediately to apply his great discoveries and to reap the benefit; and he was disappointed. He said it demanded only intelligence, energy and organization; but in that he was wrong, for it demands more, it demands some of the same enthusiasm that fired his life to enable men to do the necessary work and to make the initial material sacrifices that are required in order to reap the reward of his work and his discoveries.

Can the medical profession disclaim all responsibility that these public health reforms have not been carried out to a greater extent in Queensland? It is true that we have spoken in support of this work and issued pamphlets; but is that enough? To attain success in any sphere it is necessary to think clearly, to have high ideals and to work hard. Ronald Ross has thought clearly; the ideals of medicine are high, but what about the work? Are we willing to do it?

Those of us who are not fitted or who are unable to do this kind of work can help in two ways, first by taking a lively interest in the affairs of the British Medical Association, and secondly by quietly instilling into friends the importance and practical nature of public health work. This will prepare the field and make it easier for the few who have the necessary inclination, ability, and, above all, the enthusiasm to enter the fray and fight for these reforms.

So far what I have said has been plain fact—recent history. I have spoken about the happenings in a small country town of Queensland and of a small section of the great work that lies before the medical profession today, but the same principles that were used, however imperfectly, to carry out the work in Toowoomba apply to all our problems. There must be clear thinking and high ideals, and these must be expressed by hard work in actual life. We must be willing to take risks, as all our leaders have done in the past.

The future of our calling, the future of our civilization, is at stake; there are some hopeful signs; there are some that are doubtful.

We, here and now, day by day, tonight, in fact, are making that future; it may be a good future and worth while. If so, it will of necessity come from clear heads, big hearts and strong right arms. Our future may be in the lap of the gods, but, if so, they, in their turn, have placed it in our own hands.

Seek ye first the Kingdom of Heaven and Economic Security will be added unto you—but seek ye first Economic Security and you will never enter the Kingdom—and let us remember that with our Association, as with individuals, the Kingdom of Heaven is within.

RECENT INTRACAPSULAR FRACTURES OF THE NECK OF THE FEMUR: A CRITICAL CONSIDERATION OF THEIR TREATMENT AND A DESCRIPTION OF A NEW TECHNIQUE.

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INTRACAPSULAR, medial, subcapital or transcervical fracture of the femur are synonymous terms which indicate a high fracture of the neck, usually very close to the expanded articular head. Low fractures of the neck which involve the trochanteric region are excluded from this discussion, because they belong to a different category, causing little anxiety in treatment, and usually they unite easily.

This fracture is a particularly complex one and causes more difficulty in satisfactory treatment than any other. Indeed, there is no general agreement as to the best course of treatment. Whilst some authorities advocate conservative or non-operative treatment, others strongly advocate operation. In order to justify a surgeon in choosing operative measures of fixation, he should first of all give serious consideration to the more orthodox and conservative methods of treatment. Accordingly, the modern treatment of this complicated fracture is chiefly discussed under the following headings:

1. Conservative treatment.
2. Non-operative reduction and immobilization.
3. Operation: (i) open reduction and internal fixation, (ii) closed reduction and subcutaneous internal fixation.

CONSERVATIVE TREATMENT.

Conservative treatment is based on the widely held belief that bony union can hardly, if ever, be expected. Consequently in many cases no deliberate treatment is carried out, other than making the patient as comfortable as possible in the circumstances. The relatives are acquainted with the utter hopelessness of any active measures and the X ray examination is often considered unnecessary. The following quotation, though taken from a book expressing very advanced views on the physiology and pathology of bone (Leriche and Policard) is none the less typical of the pessimistic and ancient view of these fractures:

In other circumstances, hæmorrhagic effusion being feeble, the periosteum lacking and no utilisable fibrous investment being found in the vicinity, it was impossible that an ossifiable medium, properly speaking, could be formed. No connective-tissue is created. Consequently inter-fragmentary ossification is impossible. There are two very characteristic examples of this, subcapital fractures of the femur and fractures of the skull. Each of them almost never unites.

This last sentence is very far from being even partly true, because if they are treated like any other fracture (that is, reduction of the deformity,

¹ Read at a meeting of the Victorian Branch of the British Medical Association on October 31, 1933.

immobilization of the fragments and functional treatment) then union is commoner than non-union.

Unfortunately a combination of such factors as age, general condition of the patient, and the difficulties of immobilizing the fracture are still considered to be so insuperable that active treatment is not even attempted. On the contrary, however, there are few patients who are unsuitable for active treatment. Nevertheless many cases which are well suited for curative measures are merely dealt with by immobilizing the affected limb in a sling or between sandbags for a week or two. Thereafter, in order to avoid the danger of pneumonia, such patients are encouraged to hobble round on crutches, which are always badly managed by elderly patients. Of course, pseudarthrosis inevitably follows. With a weak fibrous union, the consequent shortening and adduction deformity may prevent the patient from ever walking again, even with crutches. Consequently he must rely on the invalid chair. Orthopaedic supports, such as the Thomas walking caliper, are usually unsatisfactory and do not facilitate walking, because the ring slips off the ischial tuberosity, displacing the lower fragment upwards and outwards and thereby further accentuating the adduction deformity.

The sedentary life so enforced in an aged person renders him not only a burden to himself and his family, but also shortens the expectation of life. Therefore conservative treatment should be reserved for the feeble or moribund patient, because the prognosis of union is sufficiently optimistic to warrant a more deliberate method of treatment.

NON-OPERATIVE REDUCTION AND IMMOBILIZATION.

It is well established that bony union cannot be anticipated by suspending the limb in a splint or slings and using an extension, although such a method is the method of choice in trochanteric fractures. Consequently Whitman's method of reduction and immobilization in a plaster cast, with the limb widely abducted, has been the most successful one in the last twenty-five years, and is on the whole the method still most widely adopted.

According to this method, after the shortening has been reduced by a powerful pull in the long axis of the limb, the thigh is widely abducted. The abduction is the anatomical basis of the reduction, because thereby the tip of the great trochanter hitches up against the upper rim of the acetabulum.

As a result of this leverage effect, the neck and head are forced into apposition, whilst the Y-shaped ligament is stretched taut below and in front of the neck. The strong ligament and the ilio-psoas tendon also act as a splint on internal rotation when the limb is abducted.

This position is now maintained by applying a very large plaster cast from the toes of the injured side to the nipples. The corrected position cannot be maintained with certainty by any splint other than plaster casts. Therefore such splints as the Jones abduction frame *et cetera* are unsatisfactory. The "well leg splint" (Roger Anderson) attempts to

correct the deformity by getting counter traction from a long plaster cast which encases the "well" or good leg. Traction is made on the bad leg by a pin through the tibia and this is connected by a bar with the "well" leg. The pelvis tilts down on the affected side and so abduction and traction overcome the adduction and shortening. This method has two objections. In the first place the hip joint is not immobilized, and in the second place the "well" leg is so immobilized that troublesome joint and muscle stiffness will affect it equally as much as on the injured side.

The application of the Whitman cast is a major procedure and not to be lightly undertaken merely because it is bloodless. It should never be removed under three months, and after that time the patient should lie in bed for a further three months. Therefore, six months at least must elapse before walking is permitted. Weight-bearing then unfortunately soon discovers that only half the patients so treated have recovered with bony union. Böhler, however, insists on these patients walking in the cast after eight days.

Figures which give the percentages of the cures by the Whitman method as higher than 50% require careful consideration and analysis. The total figures of successes by this method would probably be well below 50% if the following cases were excluded before compiling a successful series: (i) impacted fractures (10% to 15%), which cause no anxiety unless disimpacted; (ii) trochanteric fractures; (iii) fissure fractures without displacement; (iv) fracture separation of the epiphysis; (v) fracture of the neck in young adults.

Also there should be included in the failed Whitman series not only the cases which do not unite after months, but also those patients who, after a week or two, insisted on the removal of the uncomfortable cast, which they found unbearable.

Since 10% to 30% (Wilson gives the latter figure, which appears too high) die from the injury and a further number are unsuitable for treatment on account of old age, cardio-vascular disease *et cetera*, then it is clear that the percentage of cases resulting in bony union is far smaller than in any other fracture.

OPERATION.

Open Reduction and Internal Fixation.

It has generally been held as axiomatic that no operation for the introduction of a nail, screw or bone peg should be performed without a preliminary exposure of the fracture site. Otherwise one could not insure that the fracture was properly reduced or that the nail was transfixing both fragments. Even with such an exposure, which should include the lateral aspect of the great trochanter, the nail has been misdirected.

During the last twenty years many forms of nail, screw, plate, ivory peg or bone transplant (tibial or fibular graft) have been used. None of these methods has been entirely satisfactory and generally they have been inferior to the Whitman method.

Such methods of fixation are all open to three objections, quite apart from the consideration of their operative severity:

1. Despite the internal fixation by nail or peg, the same period of immobilization in a plaster cast is necessary as by the conservative Whitman method. Consequently the same skilled nursing attention for patients in such cases requires long hospitalization (busy hospitals frequently refuse to admit these patients for treatment at all). It is true, of course, that where a bone transplant has been used union is more likely to occur at the end of the time.

2. All the above forms of internal fixation soon become loose. Thus, if a tibial graft is embedded in the neck of the femur, the surfaces are rapidly decalcified and the bone matrix is absorbed, but the projecting segment of the graft, which is embedded in the muscles, is often scarcely affected. Furthermore, a square-cut peg, if driven into a round drill hole, becomes loose because of the pressure atrophy on the enclosing bone in its vicinity. The tighter the initial fit, the sooner does it become loose, and this is especially true of massive metal nails or screws, which should fit very tightly if their object of introduction is to be attained, that is, firm fixation. When the nail becomes loose, it becomes a source of irritation and not a support.

3. In all methods of osteosynthesis the vitality of the head is a factor of the greatest importance. Its blood supply has been studied with interest, but the evidence is not convincing that the head is dependent upon the *ligamentum teres* and its contained blood and lymphatic vessels. Moreover, it is not known, nor does it seem likely, that the *ligamentum teres* would be injured often. The head more probably is dependent upon the nutrient vessels in the cancellous bone of the neck for blood and lymph on the whole. To a less extent it receives vessels in the reticular reflexions from the capsule along the neck to the head. Therefore the head must always become practically avascular by the fracture. It may then be regarded as an autoplasmic bone transplant, and its union therefore with the parent bone, that is, the neck, now depends upon reduction, with firm impaction of the cancellous surfaces together and prolonged immobilization.

Sometimes the head is described as "having atrophied and disappeared in the skiagram", but this appearance is more often seen in tuberculous disease of the head. Actually in most cases nothing of the sort has happened, as is shown when, with a cure, some time later the head is said "now to have reformed". In reality the head never disappeared, though it was not apparent in the X ray picture. The effect was produced by the hyperæmia due to the injury or inflammation and this had caused complete decalcification of the bone, leaving only the translucent fibrous matrix remaining. Indeed, such an apparent disappearance of the head in the case of fracture would be favourable and would indicate hyperæmia and therefore a good blood supply for the head. On the other hand, when the head is

really avascular, it appears in the X ray pictures as relatively more dense than the neck and as a "whitish mass" compared with the atrophic and translucent or completely absorbed neck. Really, however, the calcium content of the head is unchanged, because it is isolated from the circulation and therefore cannot be decalcified. The same appearance is seen in old unreduced cases of dislocation of the *os lunatum* and in the proximal fragment of the carpal scaphoid, when non-union is present. Atrophy from disuse, on the other hand, is due to a relative hyperæmia, due to inactivity of muscles. Whilst the avascular bone of the head remains dense, the neck of the femur, particularly at the fracture site, is very much decalcified by the hyperæmia. As a result, a very characteristic appearance in old ununited cases is complete absorption of the neck, whilst the head is unchanged. A dark gap characteristically separates the neck from the head. In these cases Whitman's brilliantly conceived reconstruction operation promises better function than nailing or grafting the head to the neck, which, even if successful, results in the trochanter hitching against the acetabular rim. If the head is removed and the great trochanter is displaced lower down on the femoral shaft, a stable and fairly mobile joint results.

As indicated, the head may be avascular before any internal fixation has been attempted. Apart from this, however, the very introduction of a foreign body into the head may determine non-union for the following reasons:

1. The effect of driving in a graft or a nail is to separate the two fragments and thus leave a gap between the two surfaces of the separated bloodless head and vascular neck.

2. The preliminary drill hole removes some of the bone from the head, especially where more than one attempt has been made. Very little of this bone can be spared, if union is to be affected by the apposition of the two cancellous surfaces.

3. The effect of the pressure atrophy around the nail, screw or even bone transplant further accentuates the above.

With the introduction of the three-flanged nail by Smith-Peterson, Cave and Vangorder, however, a complete change has taken place in regard to the position of internal fixation, and they have given an impetus to the improvement of the results by current methods.

The well known advantages of the three-flanged nail and impacting operation are as follows:

1. The nail is constructed of stainless steel and thus causes no erosion of the bone, but it is better removed after six to twelve months, because it is no longer required and it can be removed very simply with the extractor. After many months the nail cannot be easily extracted, but in recent cases the bone is likely to be injured if attempts are made to remove it with lion forceps and by rocking it.

2. The blades, though very thin, have a broad gripping surface and therefore the nail fits very

tightly into the cancellous bone with minimal displacement and remains tight for months. The nail grips mainly in the dense cancellous bone of the trochanteric region and in the head beyond the old epiphyseal line. The three blades are at an angle of 120° to each other, are 8.75 to 10.0 centimetres (three and a half to four inches) long, only 0.75 millimetre (one-thirty-second of an inch) thick, and each blade is 6.0 millimetres (one-quarter of an inch) wide. Therefore the nail only takes up the space of one-tenth of a cubic inch, whilst a bone graft may have a cubic capacity of one cubic inch.

3. The blades have a very large surface area of six square inches.

4. Rotation of the fragments is prevented by the three-flanged construction.

5. An important step in the operation is the impaction of the neck into the head. Cotton stressed this in 1915. It is based on the well known observation that self-impacted or abduction fractures seldom give any anxiety. He advised placing a double layer of felt over the trochanter and then driving the trochanter with a heavy wood maul "until something is felt to give". When this happens, "the leg no longer flops out loosely". One observes that in those cases where a three-flanged nail has been introduced without impaction of the fragments the X ray picture shows a gap between them. When the nail is driven into the head it tends to separate the fragments at the surfaces of contact. The carpenter knows this, and consequently, when he is hitting a nail into two boards, he alternately hits the two boards together after every few strikings of the nail on the head.

6. The anatomical and functional results have been very good. Owing to the firm fixation of the nail, patients require very little splinting. They may walk with some weight-relieving splint or with a short plaster spica after four to six weeks.

For the introduction of this nail Smith-Peterson and his associates found it necessary to use a most extensive incision, which exposes the hip joint and the upper and outer aspect of the femoral shaft and great trochanter. When two smaller incisions were made, the nail could not be directed accurately. A very great objection to this original technique soon became manifest to those surgeons who adopted it. With the enormous skin incision, exposure of the joint and opening up of the muscle planes (division of the anterior attachments of the gluteal muscles from the ilium and division of the *tensor fasciae femoris* muscle) plus the difficulty of nursing the patient with such a wound near the excretory organs, it was soon found that infection of the wound was the greatest danger to which such patients were subject. Most fatal results were attributable to this cause. I have performed this operation twice (and assisted Dr. Leo Doyle on another occasion) and was impressed with the speed with which it can be accomplished (twenty-five to thirty-five minutes), the absence of shock, and finally the entire absence practically of bleeding

under spinal analgesia. Nevertheless, in the first case a large hæmatoma had subsequently to be evacuated. In the next case particular attention was paid to all bleeding vessels and the precaution was taken of fitting a pad soaked in saline solution over the area and fixing it firmly with a specially made elastic corset. A rubber dam was also left in for twenty-four hours. Despite all such precautions (including a five days preliminary skin preparation), a collection of mildly infected blood-stained exudate was evacuated two weeks later. In neither case was bony union affected, however, and both patients made good recoveries. Apparently the mildness of the infection and the firm impaction of the fragments at the fracture site prevented the bone from being infected.

Whilst surgical opinion is strongly in favour of giving the three-flanged nail an extensive trial (and it is being used throughout the world at present), it is equally strong in condemning the major operative procedures necessary for its introduction. Having this in view, Hawley states:

It will be possible, I believe, to introduce a Smith-Peterson nail accurately in fractures of the neck of the femur through a small incision made on the outer aspect of the great trochanter. It is only necessary for someone to devise a guide so that the nail will penetrate the head not too far to the front or back.

It should be added that the nail must not penetrate too far above or below.

Closed Reduction and Subcutaneous Internal Fixation.

In order to avoid the danger of wide exposure of the joint, various methods have been devised for the introduction of bone transplants or the three-flanged nail through a small incision over the lateral aspect of the upper end of the femur. None of these, that I am aware of, has entirely solved all of the following problems that confront such attempts:

1. Reduction of the deformity must be assured.
2. The angle between the neck of the femur and the upper end of the shaft (vertical neck-shaft angle) must be determined. It is usually about 130° .
3. The forward, declination or torsion angle of the neck of the femur must be determined. The neck of the femur is not only directed upwards, but also inwards and forwards. The latter direction is the declination angle and represents a twist on the neck forwards of about 15° , but it varies and may even look backwards (Frazer).
4. The above findings give the direction of the neck in two planes, but we must still determine the exact site on the lateral aspect of the femur, where the nail must begin its course in order to pass upward, inwards and forwards, in order to traverse the median longitudinal axis of the neck and hit the head in the same axis and at right angles to its diameter.
5. Finally, there must be some guide to control continually the accurate course of the nail. Also the required length of the nail should be predetermined.

A NEW TECHNIQUE.

A technique which determines with precision all these essential requirements has been worked out by me on the cadaver in the first case and has now been used with success on patients in seven instances, though in two cases the head was not transfixed centrally, owing to avoidable technical errors.

The object of the operation is to place a straight steel wire through the central long axis of the neck and head, and this then acts as a guide to a perforated three-flanged nail, which has a fine hole down the centre of it. The nail is not made any more massive thereby. The nail is slipped on the wire (the accuracy of whose position is determined by X ray examination in two planes). The nail can then be driven without anxiety along the wire guide, through a small incision over the lower and lateral aspect of the great trochanter.

The operation is a minor one so far as shock and trauma are concerned.

Indications for the Operation.

The original Smith-Peterson operation is being given an extensive and world-wide trial, because it is considered to be more certain and less trying (despite the major operation) than the application of and discomfort of the large cumbersome Whitman cast. Thus Smith-Peterson described 24 cases with 75% successes of bony union, two deaths from sepsis (10%), two cases of non-union due to early removal or faulty technique. Watson-Jones and Zeno each described eight cases. Böhler performed the operation ten times out of twenty cases, with two deaths. (He used the Whitman method twice only.) In the last two years I have seen twenty-one cases, the details of treatment being as follows:

Two deaths from hemiplegia and cardiac failure respectively. No actual treatment was adopted.

Two patients were not thought suitable for active treatment. One was too old and the other had multiple fractures.

Two patients were treated in the Whitman abduction cast, which was removed because the patients requested it. Non-union resulted, but moderately good function was obtained in one case by the Whitman reconstruction operation.

Five fractures were impacted and after resting in bed for four to six weeks the patients were given a walking caliper. All the fractures united.

Three patients were operated on by the original Smith-Peterson technique. (One patient was operated upon by Dr. Leo Doyle.) Union occurred in all cases. The ages of the patients were 51, 71 and 70.

Seven patients were operated on by the special technique devised by me. (Dr. Leo Doyle and Dr. Gordon Shaw each performed one operation.) These were only operated upon recently, so that no end results are available, but presumably the same results may be anticipated as after use of the three-flanged nail used in the original technique, because the principle is the same. (Patients were operated upon five, two, four, ten, five, one and two weeks after the injury. The ages of the patients were 71, 53, 67, 73, 52, 66 and 52 years.)

The subcutaneous introduction of the special perforated nail is less drastic than any other method yet devised, except adopting no active treatment at all. Therefore age is no contraindication, unless the patient is suffering from such complications as

hemiplegia, severe cardio-vascular disease, is moribund and likely to succumb as a result of the injury, or, finally, has other fractures elsewhere complicating the issue.

It is simpler, theoretically surer (impaction insures good bony apposition, whilst the nail insures perfect immobility), safer, and certainly a more comfortable method than the large Whitman abduction plaster cast, which, up to the present, has shown the best results.

The operation, though technically somewhat difficult and intricate, actually is nothing more than a minor operative procedure, devoid of any constitutional effects on the patient other than those associated with a spinal or general anaesthetic.

Technique of the Operation.

The technique of the operation may be summarized under the following headings: (a) reduction of the deformity, (b) determination of the vertical neck shaft and the declination angles, (c) placing the guide wire through the central long axis of the femoral neck and head, (d) introduction of the nail along the correctly placed guide wire.

(a) Reduction of the Deformity.

Spinal analgesia is preferable. Then the patient is placed supine on an orthopaedic table. Traction is obtained from the ankle and dorsum of the foot, around which three layers of cotton wool are wrapped and bound on with a broad bandage. Then the leather anklets or spats are firmly laced on. Counter traction is obtained from the well padded perineal bar. The lower limbs are abducted 60° to 90°, and it is essential to see that the pelvis is not tilted. The continuation downwards of a line drawn at right angles to the line between the two anterior superior iliac spines should equally subdivide the angle of abduction.

Screw traction is now made on both abducted legs. The operator keeps a thumb on each anterior superior iliac spine and the index fingers on the respective tips of the great trochanters. He is thus able to detect any tilting of the pelvis; with the thumbs and with the index fingers he notes the correction of the shortening by the gradual descent of the great trochanter on the affected side. The assistant controlling the screw on the injured side exercises more traction than on the other side, but over-traction is to be avoided. Therefore the distance between the superior anterior spine and the lower margin of the patella on each side is carefully measured with a tape measure.

The operator now places his hand behind the great trochanter and pushes it well forward, thus correcting the external rotation. This correction is maintained then by internally rotating to 45° the foot-piece (hence the necessity of well padded anklets), which is now clamped; but care should be taken that internal rotation is only sufficient to hold the great trochanter forwards, otherwise torsion may strain the knee joint.

It is important now to cover the patient warmly with blankets, excepting the actual operative field.

(b) *Determination of the Vertical Neck Shaft and Declination Angles.*

The operator should wear dark goggles for twenty minutes prior to this stage, in order to accommodate the eyes for the fluoroscopic examination.

The operator washes his hands and wears sterile gloves. Then he closes his eyes and the assistant slips the goggles up on to his forehead (Figure III) and the fluoroscopic screen is adjusted over his eyes. It has been established that the neck and head of the femur are always plainly visible on the fluoroscopic screen, even in a fat patient, providing that the eyes have been accommodated for the dark.

A 1.5 millimetre (one-sixteenth inch) Kirschner wire is now thrust by the operator's hand through the sterilized skin, at least 5.0 centimetres (two inches) below the tip of the great trochanter and on its posterior aspect, where there are no large vessels or nerves. It should lie right against the posterior border of the bone, and is then pushed up along the posterior aspect of the neck and directly visualized on the fluoroscope, so that it is parallel with and midway between the upper and lower border of the neck. As the wire glides along the posterior aspect of the neck (Figure IX, 1) the point is eventually felt to strike the fracture site. It may be necessary to withdraw it slightly and to push it onwards again in order to negotiate the fracture site, and it then passes on to strike the acetabular rim or the expanded head.

The wire and the femoral neck are very easily seen on the screen, and the procedure just described is the crux of the whole operation, because the length of wire projecting beyond the skin indicates three important facts:

1. The projecting wire indicates exactly the neck shaft angle (Figure I).

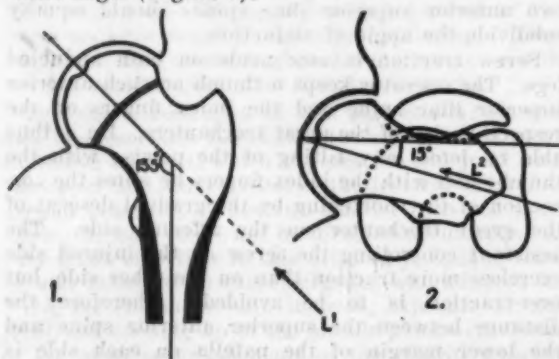


FIGURE I.

1. Diagram shows a vertical neck shaft angle of 135° . L_1 represents the central longitudinal axis of the neck, seen in the front plane. The line passes through the head at right angles to its diameter. The especially dense cancellous bone of the former epiphyseal line is indicated. As the line L_1 passes downwards and outwards it is projected upon the lateral aspect of the femur at the junction of the shaft with the base of the great trochanter. It is from this shaft-trochanteric junction that the nail should start its course along the guide wire, which is represented by line L_1 .

2. Diagram shows the declination or torsion angle of the neck of the femoral shaft. L_2 represents the central longitudinal axis of the neck seen in exactly the opposite plane to the last diagram. The true frontal or transverse axis of the femur is represented by the anterior surfaces of the femoral condyles or the transverse axis of the patella. The long axis of the neck (L_2) is seen to be rotated 15° forwards to the frontal plane of the femur.

2. Furthermore, the wire is situated midway between the upper and lower borders (that is, the fluoroscopic outline) of the neck, and therefore just in front of this wire is an area (on the lateral aspect of the femur) from which the nail must later be directed upwards, in order to lie equidistant from the upper and lower borders.

3. The wire also determines the angle of torsion (declination) within a few degrees of accuracy, because it lies behind the neck and practically parallel with it (Figure I, 2). Thus the wire looks forwards or even backwards, according to the



FIGURE III.

Under fluoroscopic control the first wire is inserted subcutaneously behind the posterior border of the femur, along the neck until the point strikes the acetabular rim. The wire should be directed so that it lies midway between the upper and lower borders of the neck, and parallel with them. Consequently the neck-shaft angle is determined, whilst the declination angle is also indicated, because the wire lies along the back of the neck. This is the crux of the whole operation.

direction of the neck. The variation is very great. Moreover, the limb has been strongly internally rotated and held in the position by the foot-piece, so that there is a tendency for the neck to lie horizontally (that is, in the supine position) or for the angle to disappear, though I have never seen this happen. This being so, any technique is wrong which does not take into consideration this angle. "Blind driving" of bone graft or nails may result in penetration of the front or posterior aspects of the neck or head.

(c) *Placing the Guide Wire Through the Central Long Axis of the Femoral Neck and Head.*

A wire is now inserted in the special drill used for introducing Kirschner wires. The tip of the wire is thrust through the skin, midway between the first wire and the palpable anterior border of the femur in this situation (Figure IV). It is now



FIGURE IV.

Diagram showing the true lateral aspect of the upper end of the femur and the pelvic bones. Note the fracture site, with reduction of any deformity, so that the neck looks forwards at about a declination angle of 15°. Observe the subcutaneously placed wire, 1, which was introduced behind the neck under fluoroscopic control until passing over the fracture site it impinged upon the acetabular rim. The second or true guide wire, 2, has been drilled into the femur, midway between the first wire and the front border of the bone, but inclined very slightly (about 5°) more forward than the first wire, 1.

drilled through the bone, and the operator must see that the wire is being inserted exactly parallel with or superimposed upon the first wire, looked at in the antero-posterior direction. An assistant watches the two wires in the opposite plane (that is, in the long axis of the body or cranio-caudal direction). Experience has shown, however, that it is necessary to incline the second wire slightly more forwards (about 5°) than the first wire. This is seen well in Figure IV.

The wire is drilled into the bone about 2.5 centimetres (one inch) further than the first wire, the point of which lies on the acetabular rim. The drill may also be marked so that the distance that the wire has penetrated can be measured.

It must not at this stage be inserted further than 10.0 centimetres (four inches). The average length of the neck and head is 8.75 to 11.25 centimetres (three and a half to four and a half inches), measured from just below the trochanter to the convexity of the head. The distance from the skin to the region of the trochanter is 2.5 to 5.0 centimetres (one to two inches).

The following errors at this stage should be avoided:

1. Failure to keep the finger on the anterior border of the bone and not pulling the skin tight between this spot and the first wire until the second wire has been thrust down on to the bone. Consequently the second wire may not be inserted midway between the front and back margins of the bone. The margin of error is not great, as the total width of the bone is only slightly more than 2.5 centimetres (one inch) in this situation. It should be noted that we are not going to drive the nail through the trochanter really, but just below it (that is, the junction of the shaft with the base of the great trochanter).

2. Failure to keep the drill containing the second wire parallel with or, rather, superimposed over the first wire seen in an antero-posterior direction. Consequently it may pass through the upper or lower surfaces of the neck or the head.

3. Failure to keep the second wire slightly more inclined forwards than the first wire results in the wire not being absolutely centrally placed. Greater error in misdirection here, however, may result in transfixing the front or back surfaces of the head and neck, thereby injuring the acetabulum or vessels and nerves, for example, the sciatic nerve.

4. The wire should not pass in further than 10.0 centimetres (four inches), otherwise it may pass into the pelvis. A loss of resistance is felt on traversing the fracture site, but thereafter bony resistance is very marked on drilling the dense cancellous head.

X ray control of the guide wires is now made. A sterilized small lead disk can be placed over the second wire, close to the skin, to distinguish it, but if it has been drilled deeper than the first wire it may be distinguished in subsequent films. Dr. Gordon Shaw suggests fitting a fine rubber tube over the second wire to maintain its asepsis during the X ray examination.

An antero-posterior picture is now taken (Figures V and IX). The two wires should lie parallel or be superimposed in this view and midway between the upper and lower borders. It also shows the depth to which the wire (number 2) in the bone has penetrated. If the wire has not penetrated sufficiently, it is drilled deeper. It has been shown that unless the guide wire in the bone penetrates

the dense head, then it may become deflected during the driving of the nail into the soft cancellous neck and therefore not act as a guide at all. This happened in one case. It is then necessary to use the extractor to remove the nail before attempting to introduce it again.

The lateral or perineal view examination is then made (Figures VI and X). This can be done only under the conditions with a shock-proof X ray unit. The pictures nearly always show the neck inclined forwards. The first placed wire lying practically parallel with the neck is seen, and then also the second wire, which, if correctly drilled in the bone, lies midway between the front and back borders of the neck. The fracture site and usually the head are all easily visualized (Figures II and X).

Whilst the films are being developed (eight minutes) the patient should be warmly covered. If the films are satisfactory, then the first wire is removed. Usually it is necessary to drill the second wire a little further into the bone, as indicated by the films. It must penetrate the head.

(d) Introduction of the Nail Along the Correctly Placed Guide Wire.

The skin and the projection of the guide wire are now carefully painted with tincture of iodine, the operation area is draped with sterile towels, and the surgeon wears sterile gloves and a gown.

The skin is trans-fixed by the knife above and below the wire and the point is thrust right down to the bone. The total length of the incision is about 5.0 centimetres (two inches) or less. The *vastus externus* muscle smoothly covers only the bone in this situation, but does not have any attach-

ment to it. Therefore, it is necessary only to divide the fibres in the line of the incision and retract the skin and muscle by sharp hooked retractors; the bone is then exposed without the necessity of any elevation from periosteal attachments.

The bone in this situation is quite dense and resists penetration in recent cases, though cases a few weeks old show softening. Therefore the bone is first marked to the depth of 1.25 centimetres (half an inch) by the nail starter, which is perforated for the wire guide and which is an abbreviated but strong nail. When this instrument has not been used as a preliminary the blades of the nail occasionally twist and turn on the dense cancellous bone of the starting point in the bone. The nail then looks

like a stalk of split celery.

The starter is now slipped off the wire. The length of nail required is estimated by subtracting the length of wire projecting from the bone from the total length of the wire (25 centimetres or 10 inches). The nail is now held by its head in a lion forceps (never by hand) and slipped down the wire. A little rotary adjustment is soon rewarded by the three blades slipping into the preliminary starter markings. A perforated punch is slipped along the wire and the nail is driven into the neck and the head. The punch is slipped off when the head of the nail reaches the bone. The wire is now removed. A

most important procedure is now carried out, but first of all traction should be slackened off the legs. The Smith-Peterson impactor is slipped over the nail head, around which it fits without touching. Consequently, when the other end of the impactor is hit with slow following blows of a hammer, the

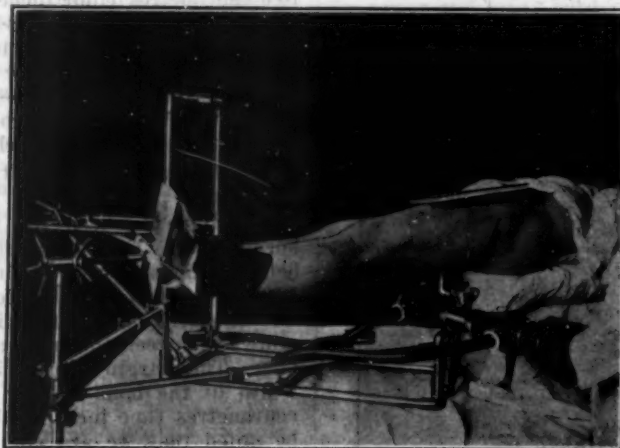


FIGURE V.
The antero-posterior X ray control picture of the two wires is being made. The patient lies with the lower limbs stretched in abduction on Böhler's orthopaedic table.

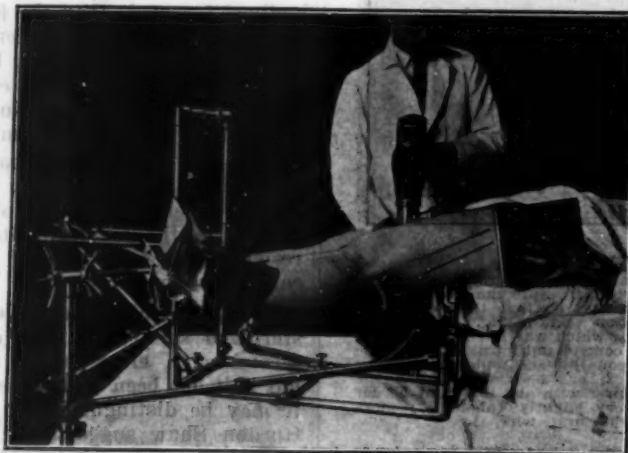


FIGURE VI.
Lateral X ray control of the two wires. Note the shock-proof X ray tube and cables held in the perineum.

neck is impacted into the head. After the impaction the nail head stands out about six to twelve millimetres (one-quarter to one-half an inch) from the bone; but on one occasion the nail continued further into the head, remaining in the neck as it was impacted into the head. It then actually passed through the head and had to be extracted. The nail is hit again, but the last step is to give a final impacting blow, because the effect of hitting the nail is always to separate the fragments. Before the incision is sewn up control X ray pictures of the nail in position are made.

The wound is then sewn with catgut, painted with mastic gum, and the dressing is gummed on and further anchored with two strips of strapping; otherwise it is difficult to fix dressings permanently in this region.

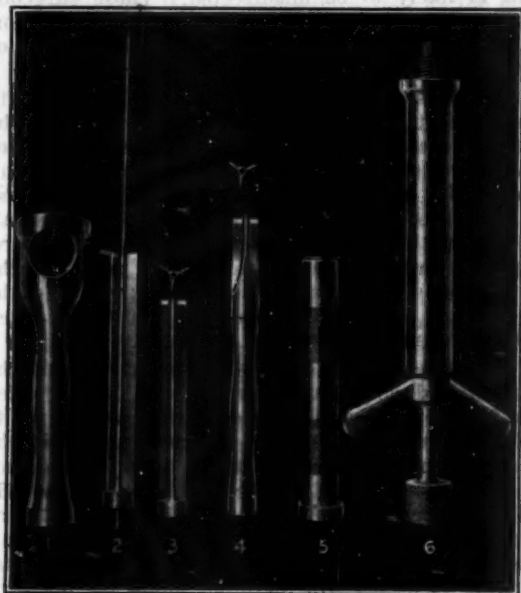


FIGURE VII.

Special and essential instruments for the operation. 1 = Smith-Peterson impactor, for driving the neck into the head and so causing impaction of the cancellous surfaces. 2 = The Smith-Peterson three-flanged rustless steel nail, which has been modified, however, so that a 1.5 millimetre (one-sixteenth inch) steel wire may be passed along a perforation through its centre and so act as a guide. Also the head contains a thread for the extractor bolt. 3 = The special perforated three-flanged nail, showing its construction in cross section. 4 = The nail starter for marking the dense bone on the outer aspect of the femur. If this is not used the nail may split and twist in the dense bone. The starter is also perforated. 5 = Perforated punch. This fits on to the nail head and so permits the nail to be driven along the guide wire, which projects beyond the nail head. 6 = Nail extractor (author's design) for withdrawing a misdirected or too deeply driven nail or for extracting the nail after six months. It is similar to a motor wheel extractor. The fine thread on the centre bolt fits into the special head.

After-Treatment.

The limb is placed on a splint or slung so that the knee and hip are semiflexed with weight extension of 4.5 kilograms (ten pounds) in the long axis of the thigh.

Functional Treatment.

After one week, knee and hip exercises should be initiated for a definite period, three times daily. Movements are really occurring at the hip joint from the start, whenever the patient moves the trunk at all from the lying into the upright position (such as in the use of the bed pan). Nevertheless such movements at the hip are perfectly safe, because the fragments are so firmly fixed by the nail and the impaction that only weight-bearing would be unsafe. Though patients have walked within a few days without any splint whatever, the practice is not to be recommended. The nail should not be asked to take weight-bearing too easily and unsupported, as it may cause crushing of the cancellous tissue with gradual development of *cossa vara*. This has occurred when the patient was allowed to walk after two weeks without any support.

The patients need stay in hospital only for ten days. Then they should lie up for a further period of two or three weeks. Three weeks after the operation they may walk in a short plaster spica, which does not extend below the knee or above the navel. If this plaster cast maintains the affected side in abduction (a perineal band is necessary to prevent the cast slipping up over the opposite iliac crest and thus allowing adduction of the injured side), then early weight-bearing tends to impact the fragments, aids nutrition and thereby assists union. Alternately to the above, patients may be allowed freedom from all splints after the first ten days, after which time they lay up in bed for six weeks. At the end of six weeks they may walk around with the aid of a walking caliper or in a Hey Groves abduction splint.

Summary of the Operation.

The following, in summary, are the special features of the operation:

1. An orthopaedic table is necessary, but over-traction is to be avoided. A study of a number of lateral or perineal X ray views of these fractures has demonstrated that the head, if rotated, looks with the fractured surface forwards. The fractured surface of the neck also looks forward (because the limb is everted). The apex of the angle (formed by the fragments) is then directed forwards. Consequently internal rotation of the lower limb is very important in order to overcome the deformity and cause the two fractured surfaces to be in contact. It should be seen that this position is maintained by the foot-piece of the orthopaedic table.

2. A shockproof X ray unit is essential.

3. The placing of the first wire behind the neck of the femur, under direct fluoroscopic control, is the crux of the technique (Figure III). Leaving out this step introduces the two factors of "chance" or "trial and error" in subsequent procedures.

4. The second wire (which is to act as a guide along which the perforated nail is directed) must be drilled into the bone about a finger's breadth in front of the first wire, parallel with it in the antero-posterior plane, and slightly inclined forwards to it in the other plane (Figure IV).

5. It is essential that the second wire be drilled well into the head, beyond the dense septum of cancellous bone which represents the old epiphyseal line. If the tip of the wire does not enter the head, then the wire may be deflected (in the soft, open, cancellous bone of the true neck) during the passage of the nail along it. The wire may be regarded as being suspended between the dense trochanteric region and the dense head, the intermediate bone of the neck being too soft to support it with any certainty, especially in a fracture of some weeks' or months' standing.

6. Even though the guide wire in the bone is firmly held at one end in the dense head and at the other end by the dense cortical and cancellous bone of the trochanteric region, it may yet be kinked or bent (and then fail to act as a guide) by the passage of the nail if the following errors are not avoided:

(a) It is essential to mark the lateral aspect of the femur for a depth of 1.25 centimetres (half an inch) with the nail starter before attempting to drive in the nail. The direction of the nail starter must be so guided by the projecting guide wire that these preliminary markings are also made in the direction of the long axis of the guide wire. In order to do this the following precautions are therefore necessary. As the nail starter is only 12.5 centimetres (five inches) long, and there are probably 15.0 centimetres (six inches) of guide wire projecting, then 2.5 or 5.0 centimetres (one or two inches) of the latter should be clipped off. Consequently the starter may be hit without striking the end of the wire, which lies up the centre of the nail starter. On the other hand, if too much of the wire is clipped off, for example, if the wire is cut off flush with the bone, then the nail starter could be directed practically anywhere, almost independently of the direction of the wire. As a result, these preliminary nail markings could point in a different direction to the guide wire in the neck and head. It would be too much, then, to expect the guide wire to correct or redirect the maldirected real nail, which would necessarily start off in the wrong direction as a result of fitting into wrongly directed nail starter markings. I found in experimental operations on the cadaver that when the nail was made to start wrongly, that is, in a different direction to the guide wire, then very shortly (after about two and a half to five centimetres or one or two inches had been driven in) the wire kinked. If the nail was driven in further, the end of the wire was eventually bent at right angles to the end of the nail. Finally, if the nail was driven in further still, the end of the nail actually cut right off the 1.5 millimetre (one-sixteenth inch) stiff piano wire guide. That the nail can cut a strong steel piece of wire in half shows what strength the rustless steel nails are capable of. I also observed that it was very necessary not to bend the guide wire whilst holding the nail starter, otherwise a bad start was again made. Further, it was noted that on account of the angle between the blade surfaces of the nail starter and the lateral

surface of the femur (135° on account of the neck-shaft angle) necessarily one or two blades of the nail must bite into the bone before the other blade or blades engage on the bone. Therefore a very vigorous blow on the starter might result in kinking the projecting guide wire, resulting in a bad start again. Experience has shown that the best hammer is not an ill-balanced surgical hammer, but a heavyish tack hammer or a light carpenter's claw hammer. I learnt this latter piece of wisdom from Dr. Leo Doyle nearly two years ago. Finally, it should be stressed that the correct way to hit the nail starter is with light repeated blows in the direction of the long axis of the starter until all the three blades are well sunk in the bone. Then, and then only, is it permissible to hit harder. If the above instructions are not carried out, then even though the guide wire is correctly placed, the nail is likely to be misdirected. Those surgeons who cannot give the minutest attention to important technical details, such as the above, may not always, then, obtain a successful result.

(b) Considerable attention should be given to seeing that the actual nail blades fit into the original starter markings. The blades of the starter are only 0.75 millimetre (one-thirty-second of an inch) thick at the cutting end, but slightly increase in thickness as one reaches the junction of the nail portion with the handle part of the starter. Therefore, the triradiate cut in the bone made by the starter is slightly larger than that made by the actual nail. Hence the latter may be easily fitted into the preliminary starter markings.

(c) It seems too elementary to stress that the correct and only way to hit in the nail is when the hammer strikes the head at right angles to its surface (or the hammer is directed exactly in the long axis of the nail). If a tall operator does not kneel on the floor he will be unable to do this. He will then tend to deflect the head in a downward direction, thus directing the point of the nail upwards and kinking the guide wire, or at least tending to do so. On the other hand, the operator may hit at the head from too low a stance, when the opposite effect is produced. In the worst case of all the operator may hit the nail from every direction, thus gouging out a hole at the starting point, and thereafter the nail wobbles with every blow.

(d) Heavy blows should not be used. Gentle and repeated taps should be used.

7. Not only should the antero-posterior X ray examinations be made after the insertion of the second wire, but the perineal view must never be omitted. No skin incision should be made until the guide wire in the neck and head has been proved to be correctly placed by the X ray control in two planes.

8. As soon as the nail has been driven along the wire guide, the screw traction on the limbs should be released before beginning impaction.

9. The wound should not be closed until control X ray pictures have been made of the nail in

position. In one case I had to withdraw the nail about 1.25 centimetres (half an inch) with the extractor, because it penetrated too far.

10. Early weight-bearing (that is, under four to six weeks) is to be avoided, though hospitalization is necessary for only about ten days.

CONCLUSION.

I think that in any case suitable for any active measures the operative fixation of the fragments by the perforated three-flanged nail, introduced subcutaneously through a small incision, is safer, more easily borne, and a more certain procedure than the large Whitman cast. My object has been to show that the nail can be introduced with absolute precision and certainty through a very small incision. The seven cases in which operation by this technique was performed have occurred only during the last eight weeks, so that no end results are yet available, but it may be assumed that as the operation effects the same purpose as the open operation, therefore a similar prospect of bony union can be anticipated. That perfectly normal function can be promised by any method is a different matter. But it goes without saying that a much better functional result than the crippledness associated with non-union can be anticipated when bony union is present in these cases.

ACKNOWLEDGEMENT.

I am very grateful to and wish to thank Dr. Gordon Shaw, F.R.C.S., by whose generosity I have been able to see six cases within the last two months. Dr. Shaw used the technique already outlined in one of these cases, and I used it in the other three. He has made a bed available in his wards for any suitable case. Dr. Leo Doyle, M.S., has kindly used the technique in one case. In all, seven patients have been operated upon with this technique. Two other patients were operated on by me at the invitation of Dr. H. R. Maclean and Dr. L. Joel, at the Williamstown Hospital. Thanks to Mr. Bruce, of the Philips Lamps Proprietary, Limited, X ray department, a portable shock-proof "Metalix" unit has been available, and he has given his time and services both during the experimental stage at the Anatomy School at the Melbourne University (through the courtesy of Professor Wood Jones) and during the treatment of the six patients for whom the method was used.

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THE PHYSIOLOGY OF THE LARGE INTESTINE.¹

By PROFESSOR H. WHITBRIDGE DAVIES.

(From the Department of Physiology, University of Sydney.)

THE subject matter and literature of physiology have grown so enormously within the last few decades that we physiologists have been obliged to specialize. My own interests have been almost entirely directed to the study of respiratory function, both in health and disease, and it is with considerable misgivings that one approaches anything so obscure as an abdominal viscus. Yet the advancement of medical science necessitates close and sympathetic collaboration between the experimentalist and the clinician, and it is to be hoped that the present symposium will stimulate some useful work.

In standard text-books on physiology the subject of the large intestine is dismissed in a few pages, which, perhaps, cover more or less adequately the definitely established facts. Yet there is a vast literature of critical study and suggestive, though often apparently contradictory, experimental data. My task in briefly reviewing the subject has been greatly facilitated by the recent publication of a critical study by Larson and Barger,⁽¹⁾ but before we consider detailed findings, let us first devote a few minutes to the discussion of smooth muscle in general.

Smooth muscle, in most situations, and that of the large bowel is no exception, possesses tonus and also the inherent power of slow rhythmic contraction. The fact of the contractions being of myogenic origin seems fairly definitely established, and isolated preparations of smooth muscle, removed after previous section and degeneration of their nerve supply, exhibit these properties (tonus and rhythmic contraction), which can be modified by a variety of mechanical, chemical and electrical stimuli. The literature on the physiology of plain muscle has been critically reviewed by Lovatt Evans.⁽²⁾

In addition to local nerve plexuses, smooth muscle in general has a double nerve supply derived from the involuntary nervous system. In general the parasympathetic (vagus and sacral autonomic) is a sort of accelerator pedal, while the sympathetic acts as a sort of brake *cum* reverse apparatus. Yet this generalization seems so simple that there must be a catch about it. Although the inherent tonus and rhythmicity of a viscus such as the stomach can be modified by nervous impulses from vagus and sympathetic, the vagus is by no means always augmentor, neither does the sympathetic always inhibit. In an atonic stomach stimulation of the sympathetic may elicit increase in tonus, while, conversely, in a contracted stomach vagal stimulation may elicit relaxation. This has been abundantly demonstrated by McSwiney⁽³⁾ and his co-workers, who, moreover, have shown that the type of response depends not only upon the local condition of the viscus (for example, tonus and certain locally acting drugs), but also upon certain more general factors such as the type of anaesthetic. Thus animals anaesthetized with ether show different responses

¹ Read at the annual reunion of the Royal Prince Alfred Hospital Medical Officers' Association, September 25, 1933.

from those under "Luminal" or other drugs of the barbituric acid series. It seems probable also that such factors as asphyxia and acidosis may modify and possibly even reverse the normal vagal and sympathetic responses. We know that this occurs with bronchial musculature, and it is not improbable that the smooth muscle of the gastro-intestinal tract may be similarly modified. The work by McSwiney and his colleagues has been limited mainly to stomach and oesophagus. Whether similar modifications and reversals of function occur in the large bowel is a matter for further experimental investigation. I strongly suspect that they may. In which case the procedure of sympathectomy in Hirschsprung's disease may be merely "alterative" rather than definitely removing an exaggerated "back-peddling" effect.

Functions of the Large Bowel.

The functions of the large bowel may conveniently be considered under five headings: (i) Digestive, (ii) storing, (iii) absorptive, (iv) transmitting, (v) excretory.

The Digestive Function.

The digestive function of the large intestine can be dismissed in a few words. Studies on the fate of so-called nutrient enemata have shown that effective digestive enzymes are not present in adequate amounts. Any digestive processes which may occur are mainly, if not entirely, due to bacterial action. This is important in herbivora where bacterial enzymes can convert cellulose into absorbable and useful carbohydrate, liberating also the intracellular contents of vegetable cells. But in man or, indeed, in any carnivorous animal, it is doubtful whether a sterile colon would be a disadvantage.

The Storage Function.

The storage function in man seems to be a social, rather than a biological, necessity. Metschnikoff's idea of the reservoir enabling man to pursue prey or run away from enemies without the inconvenience of having to stop to evacuate the bowels seems to me fantastically far-stretched. In contrast to the useful reservoir idea we have the noisome cesspool theory. Far be it from me as a critical scientist to take sides in any clinical argument, but there are one or two points which seem to merit consideration. The relief, by suitable purgatives, of symptoms of foul-breath, coated tongue and lassitude associated with constipation seems to be a fact which is vouched for by a large number of competent clinical observers. On the other hand, it is well known that many persons who suffer from prolonged and obstinate constipation do not exhibit these symptoms, and enjoy normal health. There may be many possible explanations of this contradiction, for example, type of food residue, type of bacterial flora *et cetera*. Yet it seems possible that in certain cases at any rate, a physiological explanation may merit consideration and further critical investigation. The fact of reverse peristalsis is well established, and in extreme cases may give rise to faecal vomiting. Normally the ileo-caecal valve prevents regurgitation from the

colon, but it seems to me feasible that in certain cases the factor of regurgitation may be of importance.

Some personal association with investigations into possible chemical factors concerned in supposed intestinal intoxication is my excuse for a brief mention of them. Meakins and Harington⁽⁴⁾ investigated material from faecal fistulae in various regions of the large intestine. They found small amounts of histamine in the caecal contents, less in the transverse colon, and none in the faeces. Histamine was absent from the faeces, both in normal individuals and in various types of intestinal disturbance. It seemed probable that histamine was destroyed in its passage through the large intestine. Experiments showed that histamine was absorbed most readily from the ileum, less from the duodenum, and only slightly from stomach and large bowel. The liver exercised a definite protective function. Absorption of histamine was greater through a damaged mucosa. The fact of increased absorption from the ileum suggests a greater importance for ileo-caecal regurgitation. There are various other putrefactive amines which have marked pharmacological effects. J. J. Graham Brown⁽⁵⁾ showed the similarity of the action of para-hydroxy-phenyl-ethylamine ("Tyramine") to certain symptoms which he regarded as those of intestinal intoxication. This amine is formed from tyrosine by bacterial action, and can be detected in the urine in certain cases. It has a marked sympathetico-mimetic effect, and when injected causes increased blood pressure and bradycardia.

The Absorptive Function.

The absorptive functions of the large bowel are concerned mainly with water. W. J. Mayo has said that "man eats with his jejunum and ileum and drinks with his caecum". This is probably substantially correct. Water and crystalloid substances in solution are mostly absorbed very readily. There are certain exceptions, however, for example, magnesium sulphate. Many drugs are absorbed readily if in watery solution.

The Transmitting Function.

Volumes have been written regarding the transmitting function of the large intestine and its movements. The latter are of two kinds, transmitting and churning. I do not propose to give a detailed account of the various methods of research, experimental findings or conclusions. These are fully dealt with in the monographs of Hurst⁽⁶⁾ and Alvarez.⁽⁷⁾ In the time available one must limit oneself to recent points of interest. The first concerns the gastro-colic reflex. This was first observed in man by Hurst and Newton⁽⁸⁾ in 1913. Schmidt⁽⁹⁾ has shown that vagal fibres in cats and dogs pass to the caecum and transverse colon. This suggests a possible efferent path for the gastro-colic reflex. The second concerns certain observations made by Barcroft and Steggerda,⁽¹⁰⁾ who used a new technique of exteriorization of the proximal portion of the large bowel in dogs. They showed that the gastro-colic reflex occurred in dogs within a few minutes after feeding. Kneading contractions occurred about every thirty minutes, as also did deep peristaltic and anti-peristaltic waves. Smaller contractions, both peristaltic and anti-

ILLUSTRATIONS TO THE ARTICLE BY DR. THOMAS KING.



FIGURE VIII.
Typical subcapital fracture five weeks after the injury.

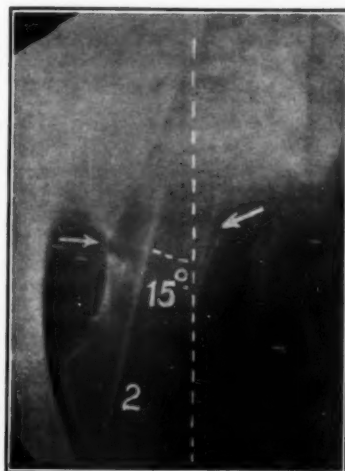


FIGURE II.
True lateral X ray picture of the femoral neck. The central ray was directed at an angle of 45° to the perineum, but the target should be in the same horizontal plane as the palpable great trochanter. The iliac crest touches the upper edge of the cassette, which is held with its long axis horizontal. The guide wire, 2, is centrally placed in the long axis of the neck and head. The declination angle of 15° is accurately determined by drawing a line parallel with the long edge of the film (which represents the true frontal plane, because the cassette was held horizontal) to the wire. Note the good reduction of the fracture.

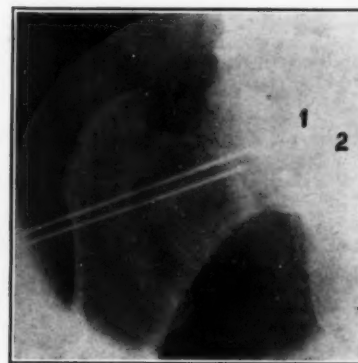


FIGURE IX.
Same case as Figure VIII. The two wires are seen to be parallel and almost superimposed. Number 1 lies behind the neck; number 2 is in the bone. The number 2 wire, in the bone, is the guide wire for the nail and its point is placed deeper than the first wire. Note the good reduction of the fracture.



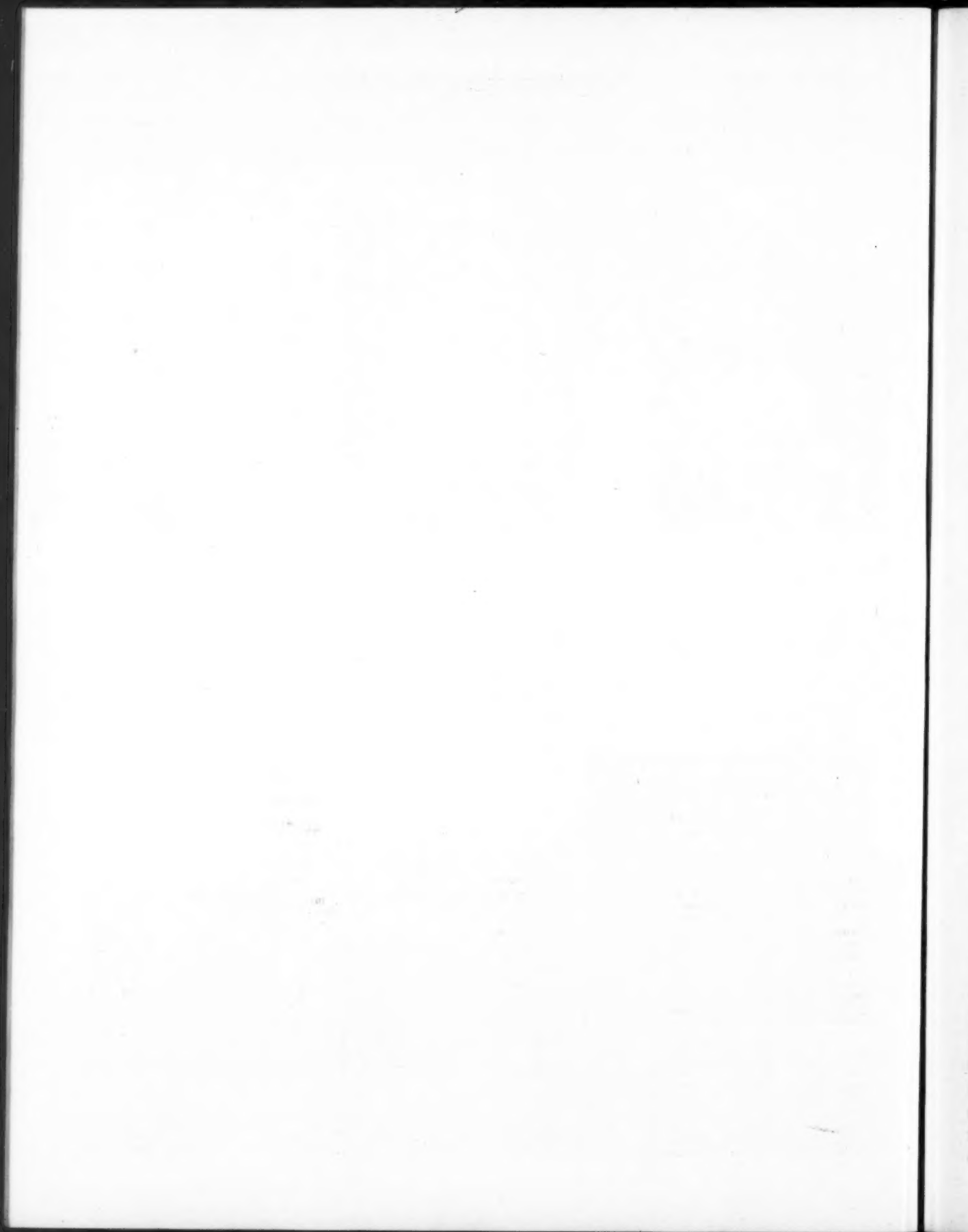
FIGURE X.
Same case as Figures VIII and IX. Lateral or perineal X ray control picture of the two wires. Note that the second wire (in the bone) lies midway between and parallel with the front and back borders of the neck. Observe that the second wire has been inclined slightly more forwards than the first wire, which lies behind the neck. Also the arrow points to the gap at the fracture site, indicating over-traction, and thus traction is always slackened off after the nail has been inserted and before beginning impaction. Good reduction is seen. X = *Tuber ischii*.



FIGURE XI.
Same case as Figures VIII, IX and X. Antero-posterior picture made after introduction of the nail along the guide wire, which is seen. Observe the very correct introduction of the nail.



FIGURE XII.
Lateral or perineal picture of case illustrated by Figures VIII to XI, showing the nail accurately lying midway between and parallel with front and back borders of the bone. The guide wire is well seen also.



peristaltic, occurred at a rate of five to seven per minute. The method has considerable advantages, and opens up possibilities of considerable useful work.

The Excretory Function.

The excretory functions of the large intestine are of minor importance. The faeces consist mainly of food residue and dead bacteria. The main substances excreted by it are calcium, magnesium, phosphates, iron and other heavy metals. Certain other substances, such as drugs and toxins, may be excreted to a slight extent.

Another matter of recent investigation calls for some mention. Florey⁽¹¹⁾ has studied mucous secretion by the goblet cells by Thiry fistula, exteriorization, and tissue culture methods and showed it to be independent of nervous control.

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Reports of Cases.

BILATERAL ACUTE EXTERNAL OTITIS DUE TO BACILLUS PYOCYANEUS.

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A MALE patient, aged twenty-seven years, was first seen on November 7, 1932, with very acute bilateral external otitis. He had just landed from a three months' trip in the East, including Japan, China, Java and Malay States. The history was obtained from the ship's surgeon, who had then left his ship and had not his complete notes. (He has expressed a wish not to have his name published.) The history began ten days before, in the right ear; acute pain and throbbing were present, but no fever; there was slight redness of the external canal, but not of the drum. The inflammation increased; pain became intense, the temperature rose to 37.8° C. (100° F.), and the drum became dull and opaque. The treatment adopted was the use of rectified spirit drops and of a wick saturated with glycerine and carbolic acid. The inflammation subsided on the third day and the pain disappeared; then the next day the left ear became affected in the same way, but the pain was less and subsided in two days.

On the sixth day the right ear flared up again, this time becoming much worse; the whole external canal became inflamed and the swelling extended back over

the mastoid and forward over the temporo-mandibular joint; the drum became leaden coloured and was then obscured by swelling. Radiant heat was the only measure that gave any relief from pain, and the condition gradually improved. On the ninth day the left ear again flared up in the same way.

The condition when I first saw the patient was as follows. The left ear and external canal were red and swollen and very tender; a profuse, thin, watery discharge was present; the drum could not be seen owing to the swelling. The inflammation extended back on to the mastoid and forward over the temporo-mandibular joint, making eating very painful; the pinna was pushed forward and marked middle ear deafness was observed at this stage.

In the right ear the same condition was present, but it was slightly modified; the drum could be seen injected, opaque, but not bulging. Marked constitutional symptoms were present. The temperature was 37.9° C. (100.2° F.), the pulse rate was 100, and general malaise, anorexia and slight constipation were present.

Swabs were taken from both ears and gauze wicks were introduced; they were kept wet with rectified spirit drops at hourly intervals. The secretion from both sides became much more profuse, and in twelve hours the left drum could be seen. The swabs yielded a pure culture of *Bacillus pyocyaneus* and a vaccine was prepared and given in the usual graduated doses. The condition improved rapidly, and after two weeks the patient went to New Zealand with a slight discharge only. He continued to have the vaccine for another six weeks, and when again seen three months later, he had completely recovered. The ear drums appeared normal and there was no defect in the hearing of either ear.

A. B. Lilley and A. J. Bearup report nine cases of blood infection due to *Bacillus pyocyaneus*, which gave rise to symptoms similar to those of typhoid fever; in fact, all the cases were first diagnosed as that disease. Except for the isolation of the organism from the blood, the absence of a leucocytosis was the only difference, and they decide that the disease is contracted in the same way, by faecal contamination of the water supply.

I was unable to gain any idea of how the infection arose in this case, but report the case as showing the extreme virulence of an organism in the tropics, which appears to be much more benign in colder climates.

I am indebted to Dr. L. Utz for the bacteriological findings.

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Reviews.

ENDOCRINOLOGY.

THE vast subject of modern knowledge of the endocrines needs a courageous man to undertake the task of doing it justice in a book. The amount of material is so overwhelming, the bulk of experimental work so great, and the nature of the study so peculiarly difficult to apply to clinical medicine that such a book, to be adequate, requires industry and judgement of a high order. William Engelbach has produced a three-volume work on the endocrines in relation to practical medicine which contains a vast amount of excellent material.¹ In its pages there is such a wealth of material that the reader finds it hard to make his way through the internal secretory labyrinth. Moreover, the author has not adopted a simple method. He has divided the subject into three parts, dealt with each in a separate volume, of which one deals with

¹ "Endocrine Medicine", by William Engelbach, M.D., F.A.C.P., B.S., M.S., D.Sc., with foreword by L. F. Barker; 1932. London: Baillière, Tindall and Cox. In three volumes plus an index volume. Royal 8vo.; Volume I, pp. 495; Volume II, pp. 491; Volume III, pp. 886; Index, pp. 123; with 932 illustrations. Price: £10.

history, physiology and the methods of clinical study, one with clinical endocrine disorders appearing in infants and juveniles, and one with these as they are found in adolescents and adults. The separation of the physiological considerations from the bedside studies is quite proper, and this part of the book is very good, containing a summary of the recent important experimental work done up to last year. But when one wishes to pursue, say, the subject of pituitary disorders, it is necessary to read through several entirely distinct accounts, dealing with these states as they arise at different ages. This of necessity involves repetition which becomes tiresome. The clinical side of this work is uneven. It contains a truly wonderful collection of case histories. No trouble has been spared to make these as complete as possible; in fact the detail is almost embarrassingly profuse in many cases. There certainly seems to be good evidence of some therapeutic successes, even in some of the less clearly defined syndromes; and the clinicians treating these patients have shown commendable enterprise in attempting to ameliorate their condition, not merely regarding them as so much interesting material for examination and speculation. But it must be admitted that the grounds for clinical classification are at times distinctly tenuous, and it almost seems as if the author had concentrated on those glandular dystrophies that are ill-defined and difficult of substantiation. Thus the sex hormone disturbances are given a great deal of attention, and the consideration of the adrenal, the liver and the pancreas is omitted, apparently to form the subject of a future volume. Some of the author's classifications are open to grave objections; thus he constantly speaks of "thyreopituitarism" and "pituitarothyreoidism", names used according as the thyroid or the pituitary gland has been primarily at fault; this assumption in any one given case must surely be difficult to sustain. In certain subjects where more definite knowledge has been gained, as, for example, the thyroid, one looks for a more authoritative handling, perhaps, after the sureness with which the author has dealt with the vaguer syndromes.

Two interesting sections of the work are those dealing with anthropometry and the radiological study of ossification, illustrated in profuse detail, and, in the latter instance, with many plates. There are also many photographs of patients in these volumes, showing clearly the changes described in the text.

Without doubt the author has produced a work containing an extraordinary amount of valuable material. Even where the pure scientist might cavil at his speculative type of diagnosis, the clinician will find suggestions that may with advantage be followed as regards treatment, though an exact aetiological basis may not always be proved to a critical mind. But one cannot help wishing that there had been more compression of the material, for with a more coherent arrangement room might have been found for some syndromes like Addison's disease, the description of which would have added to the value of the work.

The book can be recommended as a reference work, for it would require untold energy and time to disinter from the literature all, or indeed even a portion of, the information it contains. It is not easy to read, or even to consult, owing to its rather turgid style and its diffuse arrangement, but there is a separate volume containing a selected bibliography and an adequate index. The production of this book is of an extremely high standard as regards printing and binding, and all the illustrations are excellent.

DIABETES AND HIGH CARBOHYDRATE DIETS.

SIMPLICITY and clarity are the keynotes of the modern treatment of diabetes; simplicity and clarity are the keynotes of the excellent little manual on "The Diagnosis and Treatment of Diabetes and the Use of High Carbohydrate Diets" by W. Wilson Ingram and G. V. Rudd.¹

¹"The Diagnosis and Treatment of Diabetes and the Use of High Carbohydrate Diets", by W. W. Ingram, M.D., and G. V. Rudd, M.Sc., with a preface by C. G. Lambie, M.D., F.R.C.P., F.R.S.E.; 1933. Australia: Angus and Robertson, Limited. Crown 8vo., pp. 26. Price: 5s. net.

Within the short space of eighty pages the authors have managed to include all that the diabetic need know to carry out his physician's instructions intelligently and accurately and to understand what lies behind those instructions. The whole field of diabetic physiology, symptomatology and therapy is traversed; short appendices on diets and on blood-sugar estimation form a valuable supplement. The views expressed are clear and definite and are throughout marked by sound common sense and by an obviously wide practical knowledge of the problems involved.

There are one or two minor points as to both included and excluded matter which lend themselves a little to discussion. The example of the "mild diabetic curve" in the chapter on "Laboratory Diagnosis" might well be regarded as representing an extreme type of the "lag curve", the pathological significance of which is very doubtful. The omission of any mention of adrenaline and pituitrin in the treatment of advanced hypoglycemia is surprising. It is doubtful whether even the very clear description of the MacLean blood-sugar technique will persuade the average general practitioner to make himself familiar with that procedure. The Crecelius-Seifert method, quicker, simpler and far more suitable for bedside work, might well merit inclusion in this section of the book. These are minor criticisms, however; within their chosen limitations it is astonishing how little of the best modern practice in diabetic therapy the authors have left unmentioned.

The style is lucid; the charts and tables are clear and well drawn. So much diabetic wisdom has not yet appeared in any volume of this size, or, for that matter, of twice this size; it can be recommended with equal confidence to the diabetic patient and to his physician and is likely to provide valuable help to them both.

Notes on Books, Current Journals and New Appliances.

PHYSICAL CULTURE FOR WOMEN.

DR. TH. H. VAN DE VELDE, who is the author of several books on marriage and sex, has written a book entitled: "Sex Efficiency Through Exercises: Special Physical Culture for Women."¹ This book is written as a guide for women and for those who help them (doctors, midwives, nurses and gymnastic instructresses) towards the full evolution and utilization of the feminine sexual capacities and faculties. These capacities, the author states in his preface, should include active participation in the act of sexual congress and appropriate voluntary muscular action which assists the act of birth. Women generally, the author holds, are at a disadvantage because they are lacking in muscular mastery and harmony. In this book the author tries to teach women how mastery and harmony of muscular action may be obtained. He makes a statement with which all medical practitioners will agree when he lays emphasis on the need for the restoration of woman's general health and genital efficiency after childbirth.

The book is divided into two parts, the first dealing with pelvic exercises in general and the second with exercises during pregnancy and after childbirth. The exercises recommended by the author are described in detail and are freely illustrated. The author has adopted the novel expedient of including at the end of the book 480 illustrations in cinematograph form. These are flickered with the thumb and illustrate the more important of the exercises. The exercises described by the author might be used with profit by any woman, regardless of whether she were concerned in sexual efficiency or not. Medical practitioners may find this a useful book to recommend to their patients.

¹"Sex Efficiency Through Exercises: Special Physical Culture for Women", by Th. H. Van de Velde, M.D.; 1933. London: William Heinemann (Medical Books) Limited. Demy 8vo., pp. 180, with 480 cinematographic and 54 full-page illustrations. Price: 25s. net.

The Medical Journal of Australia

SATURDAY, JANUARY 6, 1934.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction, are invited to seek the advice of the Editor.

WORKERS' COMPENSATION PRACTICE IN NEW SOUTH WALES.

THAT industry should pay for injury to workers is a principle that is recognized the world over. That industry should face its responsibility is enforced in most countries by act of parliament. The provision is both just and wise. It is carried out by insurance effected by the employer. The acts lay down the total amount of compensation to be paid, and the insurance companies determine the premium to be charged. Such an arrangement gives the worker the right to be treated as a citizen so that he has not to rely on charity. In New South Wales the *Workers' Compensation Act, 1926-1929*, has on the whole been administered satisfactorily for a number of years. To facilitate the working of this Act the New South Wales Branch of the British Medical Association entered into an arrangement with the Fire and Accident Underwriters' Association regarding the payment of fees to members of the medical profession. A schedule, known as Schedule "D", was drawn up and charges by medical practitioners have been based on this schedule. Though the Branch has never laid down a scale of fees to be charged in private practice, it may be stated that, generally speaking, the schedule rates are from 20% to 30% below the customary charges of private practitioners. Ever since the

introduction of the 1926 Act the Branch has been willing to assist, and has in fact assisted, not only medical practitioners, but also insurers, by expressing an opinion as to the reasonableness or otherwise of a practitioner's charges. Both parties have nearly always agreed to accept the findings of the committee of the Branch Council dealing with this matter.

Concerning the reasonableness of charges for treatment there will always be difference of opinion. According to the Act, in any decision as to a reasonable charge regard shall be had to the customary charges made in the community for treatment to persons other than workers. In a recent paper published in this journal, Dr. R. M. Mackay, Chief Medical Referee and Medical Assessor of the Workers' Compensation Commission of New South Wales, suggested that the earning capacity of each worker had to be taken into consideration when a decision was made as to reasonableness of a charge. The Branch Council does not agree with this view. The Council holds (and we think rightly) that the employer is liable to pay the worker, no matter what his wages may be, reasonable medical expenses, due regard, of course, being paid to the customary charges in private practice. In his paper Dr. Mackay referred to cases in which medical practitioners had been guilty of overcharging. Undoubtedly overcharging has occurred, but it is equally certain that overcharging has been very much the exception rather than the rule. The reasonableness of the medical fee raises the point that a medical practitioner has a right to be paid for his services. Because a medical practitioner chooses to treat certain persons without fee, because he chooses to reduce the fee he charges to "seamen", "laundrymen", "milliners" and "dustmen", there is no reason to expect him to make the object of his charity working men for whom insurance premiums are paid. He makes these persons the objects of his charity if he accepts an unreasonably low fee either from them or from an insurance company covering them against injury or illness arising out of or in the course of their employment. There is therefore no diversion of a large sum of money to the medical

profession, as Dr. Mackay has stated. Rather would we say that insurance companies have accepted an ordinary business risk at a premium of their own choosing, that the worker is no longer made an object of medical charity and that medical practitioners are being paid for the work they undertake.

This matter is of some importance at the present time because the Fire and Accident Underwriters' Association of New South Wales has informed the Branch Council that it will no longer pay medical fees under the Act in accordance with the scale set out in Schedule "D". This decision was made after some correspondence with the Branch Council, copies of which have been circulated to every member of the Branch. We have stated the principles underlying the medical charges under the Act in order to support the Council in its opposition to the decision of the Fire and Accident Underwriters' Association. We hope that members of the Branch have considered this matter carefully and that they will be guided by the advice of the Branch Council by taking care, first of all, that no injured worker goes without adequate treatment and, secondly, that, since the underwriters have jettisoned Schedule "D", charges for treatment of injured workers are made in accordance with the usual rates adopted in private practice. In regard to the first of these points, members of the Branch, including those employed by insurance companies, must take every opportunity of pointing out to injured workers that they are entitled to choose their own medical attendant. As far as the second is concerned, members must see that their charges are in no way excessive, lest justification be given for pointing the finger of scorn.

Current Comment.

CHRONIC ATROPHIC ARTHRITIS.

THE recent report of the British Committee on Arthritis should have stimulated interest in the subject, and a review of certain aspects of the so-called atrophic form of the disease since published in America is worthy of some attention. W. Paul Holbrook has analysed the last one thousand cases of chronic arthritis treated in the Desert Sanatorium, Arizona.¹ Over 300 of the cases

in this series fell into the category of chronic atrophic arthritis, of either infective or non-infective type. The latter includes the common variety occurring in women at about the time of the menopause, but it is admitted that the division into these types is made on purely clinical grounds, especially with regard to the difference in response to treatment. The criteria used in estimating improvement were joint swelling and mobility, blood pressure, the distribution of bone minerals, temperature, blood count, sedimentation rate of red cells, pain and other general symptoms. The author admits no specificity of aetiology, and claims no specific treatment; here he will meet with universal support. The analysis he offers concerns treatment almost solely and, of course, is naturally based upon generalizations. The forms of treatment directed towards the general health of the patient include rest and exercise, heat and massage, diet, and attention to the bowels. The prevention and correction of deformity are included in the general therapeutic measures. In addition, the special methods include removal of infected foci, transfusion, vaccines, general climatic therapy, and heliotherapy. An attempt was made to establish controls by using a test period during which ordinary nursing measures were employed before any special methods were adopted.

It should be noted that the experience of workers in this institution is against the use of heat, such as medical diathermy, except in the very chronic stages. Massage is likewise reserved for the more chronic cases requiring stimulation. Movement, of course, must be encouraged only so far as it does not give rise to pain, and a cordial degree of praise is given to the system of moving the affected parts under water. As the author remarks, when the disease is chronic it is truly a case of use or lose. He gives deformity its meed of attention, both from the curative and preventive points of view, remembering that the vast majority of the arthritic deformities occur in flexion. He dismisses diet briefly; he follows the plan of Pemberton, low carbohydrates and high vitamins, and he takes care to build up the patients with lowered nutrition, and particularly not to impose rigid restrictions upon the patients of the infective group. As regards the bowels, Holbrook finds the common redundancy of the colon remarked by other writers, with areas of spasm not infrequently noted in an otherwise atonic bowel. The bowel contents have been usually alkaline, a factor that may contribute to the pathogenicity of organisms otherwise more or less harmless, at least on animal experiment. His impression is that disturbance of the intestinal functions does seem to play a part in the cause or at least the maintenance of atrophic arthritis, but he has not found convincing evidence of amelioration of the condition of the mucosa after even prolonged treatment by irrigation.

Of the special forms of treatment one of the most provocative and interesting is that connected with

¹ *Annals of Internal Medicine*, October, 1933.

the septic focus. No benefit has been seen in the non-infective group or in any cases in which the disease has been in existence for more than five years. In the early months or even years of the infective type of arthritis, however, very encouraging results have been obtained. A warning is sounded against the incautious removal of infected foci, such as teeth or tonsils, especially during an active period, as exacerbation is very likely to occur. Transfusion has proved a very valuable adjuvant to treatment. Of vaccines Holbrook speaks warily. In fact, he declares, and with justice, that it is time to call a halt on the promiscuous injection of vaccines, since in his clinic there have been many unfortunate examples of patients who have been previously given excessive reactions or who have been highly sensitized to vaccines. He regards shock therapy as a hazardous procedure. After an apparently careful attempt to control his experiments with vaccines, he finds that the best results were obtained with autogenous organisms to which the patient exhibited definite skin sensitiveness, used in small desensitizing intravenous doses. Holbrook truly says that in a disease subject to natural remissions and apt to respond to some extent at least to many of the general forms of treatment it is very difficult to form an unbiased opinion. With his final judgement all careful clinicians will agree, that vaccines are of limited value and should be regarded as only an adjunct in treatment, and then only under the most careful supervision. Climate is another knotty problem. Survey of the Indians living chiefly on beans and corn in the Tucson desert shows that in spite of the frequency of dental sepsis atrophic arthritis is unknown among them. Other native tribes living in different climates, but under apparently identical conditions, show a high incidence of joint disease. Just what are the beneficial climatic features seems difficult to determine with the data available, but, speaking generally, a warm dry climate with a minimal variation of the barometric pressure would appear to present the ideal.

In the absence of a specific treatment every patient should be carefully studied. No favourite routine should be blindly adopted, all present indications should be met, and all future dangers foreseen so far as is possible.

BROMIDE POISONING.

WILLIAM OSLER spoke of consultants from whom it was difficult for a patient to escape without a favourite prescription. There have been such; probably there are still such. And it is more than likely that one or more of the commonly used bromide salts enter into the pet formula. Certainly the bromides are amongst the most generally employed drugs. Yet if most prescribers were asked the toxic symptoms, their answers might be at variance with the phenomena actually observed. For example, is it generally recognized that a

bromide rash is not commonly seen in those patients who show signs of intoxication? E. B. Craven reports a small series of eight cases showing the toxic effects of bromides.¹ Its particular interest is that the patients studied were not of the psychiatric type; therefore the modification of the delirium state due to the drug by the mental make-up of the patient was not an important factor. It is also important to realize that these patients were just of the usual type who might attend an out-patient department.

Craven's analysis of his cases shows that the most commonly observed symptoms are restlessness, irritability, emotional instability, disordered dreams, headache, weakness, ataxia manifested by lack of fine control of ordinary motor acts, including speech, blurred vision, lethargy merging into stupor, psychic disorientation, fabrication, hallucinations, delusions, and loss of memory. The patients did not appear obviously ill, though the tongue was furred and the skin and mucous membranes were dry. The reflexes were hyperactive. Treatment consisted of isolation and hydrotherapy, care being taken to insure a high fluid intake, in view of the tendency towards dehydration. Sedatives and hypnotics did not help; they rather increased the hallucinatory state of the patients. Sodium chloride was found useful, for its use is based upon the fact of bromine substitution that occurs in bromide poisoning, and it acts by assisting in the elimination of this retained bromine radical. Craven did not find, as some others have reported, that the administration of sodium chloride caused a preliminary rise in the blood bromides, with a concomitant increase in the severity of the clinical symptoms. Little improvement was noted for about five days, but soon after this a rapid change for the better was found. In comparing the clinical state with the blood chemistry it was established that a concentration of 25 millimols in the blood coincided with a state of acute delirium, and delirium usually persisted until the blood bromide fell below 20 millimols. Comparable results were obtained with the spinal fluid, in which the levels are lower than the blood. Investigation of the percentage of total halide replaced by bromide seems to show that the relationship between the blood chemistry and the clinical state will be found to be even closer when this estimation is used as a criterion of poisoning.

This work confirms the findings of other investigators in the same field, including Sippe and Bostock, who published in this journal recently a series of cases with blood analyses. The important points are the somewhat distinctive, if variable, clinical picture, the infrequency of skin rashes in the affected persons, the variability of the intoxication level in different patients, the relative slowness of excretion, and with these two last must be linked up the fairly constant relation existing between the amount of the bromine radical in the body and the symptoms thereby produced.

¹ *The American Journal of the Medical Sciences*, October, 1933.

Abstracts from Current Medical Literature.

SURGERY.

Intestinal Anastomosis.

W. D. GATCH (*The American Journal of Surgery*, May, 1933) discusses intestinal anastomosis and gives a description of a simple aseptic technique. The literature on intestinal anastomosis still consists largely of descriptions of technique, though it is doubtful if a single new principle of operation has been introduced in the last twenty years. Writers seem to assume that the high mortality rate which follows the operation is due to errors in the performance of the operation, such as faulty suturing, failure to preserve the blood supply of the bowel, or the inversion of too wide a flange by the stitches. While mistakes of this kind do increase the death rate, there is good reason to believe that they are not the chief cause of it. Intestinal anastomosis should be regarded as the final step in the cure of intestinal obstruction. It should not be done until the patient has recovered completely from the local and systemic effects of obstruction. Neglect of this principle is probably a more important cause of death after the operation than is faulty technique in its performance. Done on an intact patient who has a clean bowel, intestinal anastomosis should not be a very dangerous operation. Distension of the bowel makes it anemic and jeopardizes the success of any intestinal suture. Intestinal anastomosis should not be done before the bowel has recovered completely from the effects of distension. Every possible precaution should be taken to prevent distension of the anastomosis after operation. An aseptic technique is preferable to an open technique, provided it can be carried out as readily, and provided it insures as trustworthy a result. The technique illustrated has been found by clinical trial to meet these requirements. The short lateral anastomosis should be preferred for human surgery to the end-to-end suture. It is safer and gives as good or better function.

Gastric Lavage in Surgery.

A. KRECKE (*Münchener Medizinische Wochenschrift*, August 11, 1933) advocates wider use of gastric lavage in abdominal surgery generally, and especially in the pre-operative and post-operative treatment of pyloric stenosis, pyloric cancer and gastric ulcer. He uses this treatment even when perforation or hemorrhage has occurred. As regards the latter, he agrees that removal by lavage of the mass of blood clot which is filling the stomach allows the stomach wall to contract, and further that this treatment allows of the introduction into

the stomach of coagulants which may prevent further bleeding. For gastric dilatation which may follow gastro-enterostomy or, indeed, any abdominal operation, he washes out the stomach at least twice a day, sometimes oftener, and continues until the effluent no longer shows any trace of bile. If the vomiting and the repeated lavage are exhausting the patient, he uses a small nasal tube, which he leaves in perhaps for several days. In one case he left the tube for six days and every day evacuated up to six litres of fluid stomach contents. He recalls that in 1885, before Heineke did the first plastic operation for pyloric stenosis, the patient, every day for three months, had gastric lavage until all food residue was removed. He urges the importance of preparatory lavage, even when no vomiting has occurred, in such conditions as intestinal obstruction and strangulated hernia. This preparation is of value in preventing the occurrence of septic pneumonia after the operation.

Treatment of Gastric and Duodenal Ulcers.

R. LERICHE (*La Presse Médicale*, August 23, 1933) analyses the results obtained by himself and his colleagues at Strasburg in 1925 to 1932 in operations on 225 patients suffering from gastric and duodenal ulcers. Of these, 129 had posterior gastro-enterostomy and 96 gastrectomy. As a result of his experience he considers that gastro-enterostomy should be reserved for small duodenal ulcers and for ulcers that are definitely pyloric and causing stenosis. For the great majority of others, unless there is a contraindication, such as obesity or a very bad general condition, gastrectomy should be the operation. Three reasons for this choice are: (i) A much better result occurs after gastrectomy. Many patients who have had gastro-enterostomy yet retain gastric symptoms. (ii) There is risk of peptic ulcer when the intestine has been sewn to the stomach which still remains hyperpeptic. (iii) There is risk of cancerous development even in an ulcer of typical appearance. Against gastrectomy the only argument is the severity of the operation. The relative mortality is for gastro-enterostomy 1% to 2%, for gastrectomy 8%, 10% or 15%. Of 96 gastrectomies at Strasburg 14 were fatal. The chief difficulty of the operation is the suturing. In 13 of the 14 patients who died, an autopsy showed a local operative defect. The results obtained depend on the technique of the operator. In the author's series of gastrectomies there were 13 deaths in the first 63, and only one death in the last 33 cases. He insists on the need for wide resection—nine to ten centimetres of the lesser curvature and eighteen to twenty centimetres of the greater curvature. He describes at considerable length the technique which he uses, and insists on extreme attention to detail. Speed in doing gastrectomy is the surest cause of

failure. The operation may take one and a half to two hours or even longer. He remarks that in any branch of surgery the operator succeeds best who is most meticulous about minutiae.

Drainage of the Pleural Cavity.

F. C. FRASER (*The Indian Medical Gazette*, September, 1932) describes an operation for draining the pleural cavity. He states that the operation was designed for the continuous drainage of a pleural cavity that filled up so rapidly with fluid that it had to be aspirated every day. "Resection of a rib is but the production of a compound fracture, and there ought to be means of avoiding this." The author was led to consider the possibility of trephining a rib. Accordingly, under local anaesthesia, an incision 3.75 centimetres in length was carried down to the periosteum of the eighth rib in the mid-axillary line; the soft tissues were held back by a mastoid retractor and the periosteum was cleared from the rib over an area 2.5 centimetres square. A trephine corresponding in diameter to the largest size tracheotomy tube was then used to make a hole through the rib. An area of pleura was infiltrated with a local anaesthetic, and sinus forceps were passed into the pleural cavity. A tracheotomy tube was then passed and fixed to the periosteum of the rib by a silk suture. The tissues were allowed to fall back into position. The author states that the tube fitted snugly and comfortably and the drainage was efficient. He remarks that the method has several advantages, namely: the wound is small; there is very little bleeding if adrenaline is used; the rib is not mutilated; the tracheotomy tube, lying flush with the thoracic wall, causes no irritation of the pleura; the operation is rapidly performed compared with rib resection.

Primary Torsion of the Great Omentum.

L. ALLEN (*The New England Journal of Medicine*, August 3, 1933) reports a case of primary torsion of the great omentum in a male aged thirty. He was admitted to hospital with a diagnosis of chronic appendicitis. He had suffered from attacks of "indigestion" three months previously. These attacks were characterized by pain, general throughout the abdomen, sharp enough to cramp him up and usually coming on immediately after eating. He had an attack five days before admission to hospital, but felt well the next day. Soreness, however, developed in the right iliac region and he could not extend his right thigh or walk without pain. A steady ache remained and there was some pain in the epigastrium. The appetite was fair and the bowel action regular. He limped into hospital unable to stand erect. There was slight fullness of the right iliac region, with

moderate rigidity. Tenderness was present at McBurney's point, at a point about 1.25 centimetres (half an inch) above and to the right of the umbilicus and over the eleventh dorsal nerve. At operation the abdominal wall appeared slightly oedematous; purple, nearly gangrenous omentum presented; the omentum was twisted upon its long axis several times and adherent in the iliac fossa to the posterior wall by slight recent adhesions. The appendix was small, with an extremely fat meso-appendix and dilated base. The appendix and two pieces of nearly gangrenous omentum were removed. The patient went home on the fifteenth day.

Fractures of the Carpal Navicular and Triquetrum Bones.

JAMES E. THOMPSON (*The American Journal of Surgery*, August, 1933) writes about fractures of the carpal navicular and triquetrum bones. The interest in fractures of the carpus since the advent of X rays has more or less centred about the navicular bone, mainly because it has revealed the frequency with which this structure is involved, and has enabled a positive diagnosis of fracture to be made where formerly the condition might have been classed as a simple sprain. Contrary to the general impression concerning complete transverse fractures of the navicular, the prognosis is good if they are diagnosed and treated early by adequate immobilization. This adequate immobilization can be obtained and will give the most satisfactory results by employing a dorsal moulded cock-up plaster splint. The period of immobilization should be two to four weeks for fractures of the tuberosities, four to six weeks for the incomplete transverse fracture, and six weeks to three months for complete transverse fractures. Non-union is favoured by abnormal friction between the fractured fragments, rather than embarrassment of blood supply to the proximal fragments. Fractures of the triquetrum are more prevalent than heretofore considered. Visualization of the fracture can be aided through employing an oblique view. It is not uncommon for the fracture to occur associated with a fractured navicular. The prognosis is good.

Rupture of the Bladder.

J. P. HENDERSON reports two cases of intraperitoneal rupture of the urinary bladder associated with fracture of the pelvis (*Western Journal of Surgery, Obstetrics and Gynecology*, March, 1933). In injuries associated with fracture of the pelvis the skeletal damage may at first overshadow a concomitant rupture of the urinary bladder. An extensive rupture is associated with great shock, but the degree of shock is not a reliable guide. One of the results may be grave sepsis, especially in the presence of infected urine. A bladder is more

commonly ruptured if distended. Of 169 cases of rupture of the bladder described by Bartels, fracture of the true pelvis was found in 109 cases. Fracture of the true pelvis is uncommon and was found only 29 times in over 6,900 fractures. Rupture of the bladder is also uncommon, as only four to six cases are reported annually. The intraperitoneal type of rupture occurs in four out of five cases, but the extraperitoneal variety occurs almost exclusively in association with fracture of the pelvis. The author outlines a wide variety of symptoms and signs, varying according to the distension of the bladder, the position and extent of the rupture, and the sterility of the urine. There may be severe suprapubic pain, muscular rigidity, and excessive desire to urinate without power to do so. In most cases there is a striking discrepancy between the desire and the amount of urine passed. The amount of hemorrhage is not a safe guide, as a torn wound may bleed less than an incised wound. Rectal tenesmus is present in a large percentage of cases. In this condition "masterly inactivity leads to certain death". Injury to the bladder should be suspected in all cases of fracture of the pelvis, and all the recommended tests should be performed. However, the final word in diagnosis lies in laparotomy.

Sweat Gland Cancer of the Breast.

B. J. LEE, G. T. PACK AND I. SCHARNAGEL (*Surgery, Gynecology and Obstetrics*, June, 1933) describe sweat gland cancer of the breast. The human breast develops as a modified apocrine sweat gland. Apparent sweat gland tubules and cysts occur in the normal adult breast, where they anastomose with the interlobular lacteal ducts. The characteristic features which distinguish the mammary sweat gland tubules from the lacteal ducts are: constant eosinophilia of the cytoplasm, an inner layer of high columnar cells, the occasional presence of myo-epithelial cells surrounding the tubules, and the tendency to form intratubular and intracystic papillary tufts. The anatomical and staining characteristics of these cells persist through all the transitional phases of normal sweat gland tubules, cysts, intracystic papillomata, adenomata and carcinomata. Evidence is presented to substantiate the theory that sweat gland carcinomata of the breast may develop from preexisting sweat gland tubules, cysts and papillary adenomata. The various stages in this transition have been seen. Except for the peculiar properties of sweat gland structures in the breast which have been enumerated, the sweat gland carcinomata of the breast have much the same structure as other mammary cancers; for example, we find that the bulky adenocarcinomata, the comedo-carcinomata, the papillary, intraductal and intracystic carcinomata, the medullary carcinomata, the carcinoma simplex, and even scirrhous car-

cinomata of the breast are represented in this group. Sweat gland cancers of the breast occur more frequently in swarthy brunettes, whose skin has large pores and oily, coarse texture. Their regional distribution is mostly on the periphery of the breast, particularly in the axillary tail and sub-mammary fold. The frequency of pain, skin adherence, and ulceration are significant clinical features of sweat gland cancer of the breast. The degree of malignancy and the prognosis following treatment are practically the same for sweat gland cancers of the breast as for the general group of mammary cancers.

Surgical Treatment of Facial Palsy.

A. B. DUEL (*Surgery, Gynecology and Obstetrics*, February, 1933) writes that prior to 1879 there is no record of an attempt having been made to deal with facial palsy by surgical methods. Drobniak in 1879 anastomosed the spinal accessory to the facial. Exhaustive anatomical and physiological researches were conducted into the subject by Sir Charles Bell well over a century ago. About the year 1890 it was noted that recovery from the paralyses often followed the arrest of the purulent discharge from suppurating ears or mastoiditis. Two chief results followed the more frequent surgical inroads on the temporal bone: first, suppurative conditions were more frequently alleviated and, secondly, traumatic accidental cases increased. In 1895 Sir Charles Ballance united the divided facial nerve to the side of the spinal accessory with resulting partial voluntary control. Following upon exhaustive experiments in many countries, it has been definitely demonstrated that a successful anastomosis of a neighbouring nerve to the facial nerve can restore the contour of the face in repose, and by education can to a limited extent bring about voluntary controlled facial movements. Two chief obstacles have been met by workers in this field. After anastomosis the inevitable associated movements have marred the results and, secondly, there has been an entire lack of emotional expression. In collaboration with Sir Charles Ballance, the author began experiments on animals, aiming to bridge the gap between two segments of a divided facial nerve. After a series of thirteen cases restored by transplants from various nerves, the author believes that a method of dealing with facial palsy has been presented which offers sufficient improvement over the methods of anastomosis of the facial with other nerves to warrant the discontinuance of that method except in very rare instances. The author found that function was restored much more rapidly if the segment of nerve selected for transplantation were sectioned and allowed to undergo Wallerian degeneration *in situ* for from two to four weeks.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the Queensland Branch of the British Medical Association was held at the B.M.A. Building, Adelaide Street, Brisbane, on December 8, 1933, Dr. ALEX. P. MURPHY, the President, in the chair.

ANNUAL REPORT OF COUNCIL.

The annual report of the Council was taken as read on the motion of Dr. Gavin Cameron, seconded by Dr. N. G. Sutton, and was adopted on the motion of Dr. Alex. P. Murphy, seconded by Dr. E. S. Meyers. The report is as follows.

THE Council has pleasure in presenting the following report of the Branch for the year ended November 15, 1933.

Membership.

The membership of the Branch numbers 500. The additions have been: Election of new members, 10; rejoined, 2; transfers to the Branch, 15. Our losses were: Transfers from the Branch, 12; resignations, 2; default in payment of subscription, 14; deceased, 2.

The Council regrets to record the deaths of Dr. Wilton Love and Dr. G. G. Kelly, both of Brisbane. Dr. Wilton Love was one of the oldest members of the Branch, and he held the office of President in 1907.

Meetings.

General.

The annual meeting and ten ordinary meetings were held during the year, which included two clinical meetings. The average attendance at the meetings was 33 as compared with 40 last year.

Council.

Twenty-one ordinary meetings and six special meetings were held by the Council. The special meetings were held to consider the following: Lodge matters, the Toowoomba Associated Friendly Societies' Medical Institute, the medical problem of tropical Australia, and the Colonial Mutual Life Assurance Society medical and hospital service scheme.

The record of attendance of members of the Council was as follows:

	Ordinary.	Special.
Dr. Alex. P. Murphy (President)	18	5
Dr. T. A. Price (President-Elect)	20	1
Dr. E. S. Meyers (Past-President and Federal Committee Representative) ..	18	4
Dr. Kenneth Wilson (Honorary Secretary)	20	6
Dr. M. Graham Sutton (Honorary Treasurer and Honorary Curator of Museum)	18	5
Dr. Ellis Murphy (Assistant Honorary Secretary)	18	4
Dr. Gavin H. Cameron (Chairman of Com- mittees)	18	5
Dr. Neville G. Sutton (Honorary Librarian)	15	2
Dr. D. Gifford Croil (Federal Committee Representative and Councillor) ..	20	3
Dr. Hedley J. Brown (Councillor) ..	4	0
Dr. J. Grahame Drew (Councillor) ..	12	0
Dr. F. W. R. Lukin (Councillor) ..	15	3
Dr. N. W. Markwell (Councillor) ..	21	6
Dr. S. F. McDonald (Councillor) ..	17	5
Dr. M. S. Patterson (Councillor) ..	19	3
Dr. R. G. Quinn (Councillor) ..	21	5
Dr. W. N. Robertson (Councillor) ..	14	4
Dr. D. E. Trumpy (Councillor) ..	19	1
Dr. J. G. Wagner (Councillor) ..	9	1

* Resigned June 23, 1933.

* Appointed June 23, 1933.

Scientific Meetings.

February.—Clinical meeting, combined with the Brisbane Hospital Clinical Society.

March.—Dr. G. H. Brandis: "The Trigeminal Nerve in Relation to Neuralgia."

April.—Dr. Eustace Russell: "Diabetes."

May.—Dr. N. W. Markwell: "Perspective in the Examination and Treatment in Heart Disease."

June.—Joseph Bancroft Memorial Lecture, delivered by Professor Harvey Sutton: "Modern Phases of Preventive Medicine."

July.—Dr. Bruce Mayes: "The Anterior Pituitary: Its Scientific and Clinical Aspects."

August.—Dr. J. W. Heaslop: "The More Common Skin Conditions and Their Treatment."

September.—Jackson Lecture, Dr. R. W. Cilento: "Some Medical Aspects of Racial Resistance."

October.—Clinical meeting, combined with the Mater Misericordiae Hospital Clinical Society.

November.—Dr. H. S. McLelland: "Diathermy of the Cervix Uteri."

Dr. J. Cameron Hemsley: "The Surgical Treatment of Cervicitis."

Personnel of committee responsible for arranging the programme of papers: Dr. N. W. Markwell, Dr. R. G. Quinn, Dr. F. W. R. Lukin and the *ex officio* members of the Council.

The papers were illustrated by lantern slides, and many interesting cases and specimens were exhibited at the various meetings.

The Royal Australasian College of Surgeons. An invitation was extended to members of the Branch to attend a lecture delivered by Dr. P. L. Hipsley, on Wednesday, July 26, 1933, to the Royal Australasian College of Surgeons, the subject being "Acute Abdominal Emergencies in Infants and Children".

Office-Bearers.

Honorary Secretary: Dr. Kenneth Wilson.

Assistant Honorary Secretary: Dr. Ellis Murphy.

Honorary Treasurer and Curator of Museum: Dr. M. Graham Sutton.

Chairman of Committees: Dr. Gavin Cameron.

Honorary Librarian: Dr. Neville G. Sutton.

The above office-bearers, with the exception of the Honorary Secretary, are elected by the Council.

Ethics Committee.

At the last annual meeting of the Branch the following were reelected members of the Ethics Committee: Dr. A. H. Marks, Dr. J. B. McLean, Dr. G. P. Dixon, Dr. D. A. Cameron and Dr. J. A. Cameron.

No matters were referred by the Council to the Ethics Committee during the year.

Library.

The most valuable addition to the Branch library during the year consisted of books from the "Hastings Collection", which were allocated by the Library Subcommittee of the British Medical Association in London, as follows:

Morgagni: "The Seats and Causes of Disease", three volumes, 1769.

Astley Cooper: "Plates and Text on Anatomy of the Breast", 1840.

Abernethy: "Surgical and Physiological Essays", three volumes in one, 1793-97.

A. C. Celsus, by Collier, 1831.

Jas. A. Lind: "A Treatise on the Scurvy", 1757.

"The Works of Alex. Monro", 1781.

A saving has been effected on subscriptions of medical journals by obtaining them direct from the publishers. The

Head Office of the Association has kindly arranged this matter for us with regard to British publications.

A great deal of annoyance is still caused by members who borrow books from the library, retaining them for unduly long periods.

Representation.

During the year the Branch was represented as follows:

Council of the British Medical Association: Professor R. J. A. Berry.

Representative Body: Dr. Stuart Kay and Dr. B. B. Barrack.

Federal Council: Dr. D. Gifford Croll and Dr. E. S. Meyers.

Australasian Medical Publishing Company, Limited: Dr. D. Gifford Croll.

"The Medical Journal of Australia": Dr. Joyce Stobo.

Medical Officers' Relief Fund (Federal): Dr. W. N. Robertson, Dr. D. Gifford Croll and Dr. J. Cameron Hemsley.

Queensland Cancer Trust: Dr. B. L. W. Clarke and Dr. M. Graham Sutton.

Fourth Australian Cancer Conference: Dr. E. S. Meyers.

Standards Association of Australia, Queensland State Committee: Dr. W. N. Robertson and Dr. E. O. Marks.

Animal Health Board: Dr. D. Gifford Croll.

Metropolitan Milk Supply (Greater Brisbane), Limited: Dr. S. F. McDonald.

Subcommittees.

Hospital.

Personnel: Dr. S. F. McDonald, Dr. Neville G. Sutton, Dr. N. W. Markwell, Dr. R. G. Quinn and the *ex officio* members of the Council.

Nineteen meetings were held during the year, the following being the main subjects dealt with:

Hospital Problem.—With a view to arriving at a solution of the hospital problem, on the recommendation of the Council the matter was brought before the Federal Committee in March last when it was suggested that a federal hospital policy for all the Branches be drawn up. As a result of this, a committee was appointed to deal with the matter comprising representatives from all the States. A general meeting of Congress at the Hobart Session will be devoted to this important subject, when the various aspects of the problem confronting the profession will receive consideration.

The question of imposing an income limit on public hospital patients was the subject of a deputation to the Home Secretary early in the year, who stated that the matter would have to be brought before Cabinet, but apparently nothing further has been done in this connexion. It is significant that we have been informed that the Government has no objection to hospital authorities establishing contributory benefit schemes without income limit or other limitation, provided that such schemes are on a reasonably sound basis.

Administration of Anæsthetics by Members of Nursing Staff.—This matter was brought before the Home Secretary, and the Minister decided that, where there is only one doctor in a town, the matron or some other member of the nursing staff may administer an anæsthetic, except in special circumstances where the permission of the hospital committee is received to bring a doctor from another town.

Responsibility of Medical Officer for Hospital Fees of Private Patients.—Practically all hospitals have now deleted this rule, which was a source of unfair exploitation of the medical officers of country hospitals. The Home Secretary has definitely stated that he considers the medical practitioner should not be responsible for the hospital fees of private patients.

Access of All Medical Practitioners in Country Centres to Public Hospitals in an Honorary Capacity.—When approached on this subject, the Minister stated that the

Government does not feel disposed to interfere with hospital committees on such matters.

Colonial Mutual Life Assurance Society: Hospital and Medical Services Insurance.—The Council of the Queensland Branch has agreed to give an exclusive endorsement of the scheme to this society for a period of four years (that is, a recommendation placed on record to succeeding Councils for the next three years that from time to time the resolution be affirmed). The Council has approved of the following words being in the policy and proposal forms: "Approved and recommended by the Queensland Branch of the British Medical Association", provided that it is clearly set out that the benefits to the assured represent a contribution towards the total medical expenses, and in no way represents the physician's or surgeon's charges.

Rules and Ethical.

Personnel: Dr. W. N. Robertson, Dr. S. F. McDonald, Dr. N. W. Markwell and the *ex officio* members of the Council.

Twenty-one meetings were held, and in addition to matters of a personal nature, the following were the main subjects which received consideration:

Toowoomba Associated Friendly Societies' Medical Institute.—Following a conference between members of the Council and representatives of the institute, which was held at Toowoomba, a basis of agreement was arrived at, and the principle of the "open panel" has been accepted by the Toowoomba Friendly Societies' Institute. Further reference is made to this matter in the report of the Downs and South-Western Medical Association.

Amendment of By-Laws of the Branch.—The amendment of By-Laws Numbers 4 (c), 24 and 47 was approved at a general meeting of the Branch held on July 7, 1933. The amendments deal with the following: To make provision for "necessitous members" whose financial position is such that they are unable to pay the full annual subscription, whereby application may be made for a reduction in the rate, provided that satisfactory proof of his inability to pay the full amount is brought before the Honorary Treasurer; to make provision for specialty to be mentioned and telephone number inserted in a member's advertisement when commencing practice; to provide for the granting of approval by the Council before the issue of circulars or questionnaires on a medical or allied scientific subject to a patient by any member.

Medical Treatment of Relief Workers.—This matter was taken up with the Home Secretary, who promised to bring it before Cabinet to see if some arrangement could be arrived at in view of the demands made on the medical profession owing to the present industrial position.

Imperial War Veterans.—Members in the metropolitan area were asked to give sympathetic consideration to a request received from the Imperial War Veterans' Association to give medical attention free of charge to naval and military veterans of wars prior to 1886, who are resident in their area.

Publication of Members' Names in "Who's Who in Australia".—This matter was referred to the Federal Council and a recommendation has been forwarded approving of the publication of members' names *et cetera*, provided that particulars of the entry are submitted to and approved by the Branch Council of the State in which the member resides. This question will come up for consideration by the Federal Council.

Insurance Company Arrangements.—The arrangement made with an insurance company is working satisfactorily, and members are asked to support it in every way possible.

Proposed Medico-Legal Society.—The question of the formation of a Medico-Legal Society in Queensland is at present under consideration by the medical and legal professions.

Confidential Information Supplied to Insurance Companies.—This matter has been brought before the Federal Council and is receiving consideration.

Public Health.

Personnel: Dr. D. Gifford Croll, Dr. S. F. McDonald, Dr. N. W. Markwell, Dr. J. Grahame Drew and the *ex officio* members of the Council.

Eleven meetings were held and many important matters received attention.

Medical Problem of Tropical Australia.—The Commonwealth Government, having closed the Australian Institute of Tropical Medicine at Townsville, and in 1932 abolished the Division of Tropical Hygiene, the Council considered that it was imperative to take some steps to check this policy of abandonment of the medical problem of tropical Australia, and, if possible, to recover the ground already lost.

In pursuance of this objective a communication was sent to the Federal Committee in March, 1933, briefly outlining the situation, reiterating the findings of the Australasian Medical Congress of 1920, and pointing out the possible consequences if the Commonwealth Government persisted with its present policy.

The Federal Committee laid these views before the Commonwealth Government, together with a resolution urging the vital necessity of the restoration of the services in question or an efficient substitute for the same.

A reply having been received from the Acting Minister for Health, which in the opinion of the Council was unsatisfactory, it was deemed advisable to give the matter some publicity. A statement was consequently issued and appeared in the Brisbane daily Press of July 25. The controversy which followed demonstrated how strong is the Queensland feeling, both lay and medical, upon this subject. Never before has the Queensland Branch received such cordial and whole-hearted support from the lay Press. There appeared three important statements issued by the Council, strongly supported by eight leading articles, in the Brisbane daily Press, and a very large number of columns and paragraphs upon the subject. The Commonwealth Health Department framed a reply, to which was devoted the whole of the September issue of *Health*, the official organ of the department, but this was satisfactorily answered in a statement issued by the Council and published in the Press on September 16.

In August a deputation from the Council waited upon the Hon. J. G. Francis, M.P., Assistant Minister for Defence, and requested his support.

On August 28 the matter was again before the Federal Council of the British Medical Association, but was deferred until its next meeting in January in order that members might become more fully informed upon the subject. The Council has no intention of allowing the matter to rest here, but will press it by every means that lies within its power.

City Medical Officer of Health.—Since the abolition of the appointment of a full-time Medical Officer of Health by the Brisbane City Council, the Council of the Branch has done all in its power to revive the question and bring before the authorities and the public the serious position which is likely to result from the inadequate control of the health services in a city of the size of Brisbane. The Government was seized with the importance of the situation, and the Home Secretary deputed the Commissioner for Public Health to look into the position and report thereon. As an outcome of this investigation it was decided that the appointment of a full-time Medical Officer of Health for the City of Brisbane was necessary and the part-time Medical Officer was appointed in this capacity until June of next year. It is understood that the appointment is an *interim* one, and that applications for the position will be called for promptly.

Health Week.—Members of the Branch delivered lectures during Health Week, which was held in Brisbane in April last. Approval was given by the Council to such lectures being delivered, provided that the lecturers refrained from dealing with the treatment of disease and that the minimum of publicity was given with regard to the use of the names of members of the Branch taking part.

Chronic Nephritis Consultative Committee.—The personnel comprises Dr. S. F. McDonald, Dr. J. Lockhart

Gibson, Dr. L. Jarvis Nye, Dr. D. Gifford Croll, Dr. Alex. Murphy, Dr. A. Jefferis Turner, Dr. Ellis Murphy, Dr. J. V. Duhig, Dr. B. L. W. Clarke, Dr. R. W. Cilento, Dr. J. Coffey, Dr. L. St. Vincent Welch (co-opted), Dr. A. Breinl (Townsville).

Meetings have been held throughout the year at which the report of the Commonwealth Health Department was discussed and criticized, and at present investigation is being carried out as follows:

Animal experiments on the effect of ingested lead paint. Investigation into the presence of plumbism and nephritis among hospital out-patients.

Standards of lead poisoning.

Relation of nephritis to congenital syphilis.

Malnutrition Amongst the Population.—In May last members of the staffs of the various public hospitals in the metropolitan area were asked to furnish reports on the subject as to evidence of malnutrition amongst the population. A digest of these reports was sent to the Premier, pointing out that they were based on superficial data only, and stating that it would require a deliberate investigation by a competent health officer to furnish an adequate report on the exact position.

Snake Bite Treatment.—A statement on the treatment of snake bite in Queensland is being drawn up for issue to organizations interested in the method of dealing with snake bite, such as Boy Scouts *et cetera*.

The Use of Narcotic Drugs by Ambulance Bearers.—This matter was taken up with the Department of Public Health, by whom the question was referred to the Branch for an expression of opinion. A recommendation was made that the issue of the drugs should be governed by the fact that no doctor is likely to be accessible at times, and under no circumstances should the ambulance bearers administer these drugs except in cases of accidents, as their administration by unqualified persons will often be attended by danger. Also that instructions should be issued to the bearers that when any drug has been administered to a patient, a written notification of the drug and the amount administered should accompany the patient to the hospital or the doctor.

Sterilization of the Unfit.—As a result of a request from a committee appointed in England by the Board of Control, the Home Secretary's Department has asked for representations from the Branch with regard to hereditary transmission and other causes of mental disorder and deficiency, and to consider the value of sterilization as a preventive measure. A subcommittee was appointed to draw up a report, which is at present receiving consideration by the Council.

Tuberculosis.—The question of the adequate control of tuberculosis has been taken up with the Commissioner for Public Health.

Vital Statistics.—At the request of the Registrar-General recommendations have been made with regard to the proposed alteration of Part A of the Queensland Statistics, which contains four new tables showing causes of death in age groups in districts.

Fourth Australian Cancer Conference.—Dr. E. S. Meyers, who represented the Branch at this Conference, held at Canberra in March last, submitted a report which was handed to the representatives of the Branch on the Queensland Cancer Trust.

Diphtheria Immunization.—A public statement in favour of diphtheria immunization was issued by the Branch.

Pharmaceutical Society of Queensland.—Conferences were held with this Society with reference to the adoption of the new British Pharmacopoeia, Poisons Regulations *et cetera*. Permission has been granted for the erection of a showcase in the library for the display of "A.P.F." products.

Building.

Personnel: Dr. D. Gifford Croll, Dr. W. N. Robertson, Dr. S. F. McDonald and the *ex officio* members of the Council.

Two meetings were held. Several schemes have been considered with regard to erecting a building on the "Bay View" site on Wickham

Terrace, which, in addition to providing a home for the Branch, would also be a source of income.

The matter is still under consideration.

Parliamentary.

Personnel: Dr. W. N. Robertson and Dr. T. A. Price, together with the *ex officio* members of the Council.

Publicity.

Personnel: Dr. W. N. Robertson, Dr. D. E. Trumpy, Dr. Mervyn S. Patterson, and the *ex officio* members of the Council.

Lodge.

Personnel: Dr. D. Gifford Croll, Dr. F. W. R. Lukin and the *ex officio* members of the Council.

Contract Practice Section.

Inaugurated 1929. Two general and twenty-three committee meetings were held. The annual meeting was held on July 4, 1933, when the following office-bearers were elected: *Chairman*, Dr. F. W. R. Lukin; *Honorary Secretary and Treasurer*, Dr. Gavin H. Cameron; *Committee*, Dr. J. G. Wagner, Dr. M. Elliot-Smith, Dr. A. E. Mason, Dr. J. L. Selwood, Dr. A. B. Carvosso, Dr. C. E. Tucker, Dr. D. V. Shell, Dr. H. W. Horn, Dr. L. P. Winterbotham, Dr. A. W. St. Ledger, Dr. F. C. Bechtel, and Dr. C. D. Gillies.

The most important business dealt with during the period under review was in connexion with negotiations regarding the formula for the fixation of the capitation fee. No finality has been reached.

The minimum capitation fee still remains at 25s. *per annum* for adult male members, with half that amount for females, two-thirds for juniors and one-quarter for juveniles.

In January of this year the final instalment of the deficiency in the funds of the Friendly Societies' Medical and Hospital Council was repaid.

As there appears to have been an appreciable influx of juvenile lodge members, who have been placed on the lists of medical officers without medical examination, and, in many cases, it is claimed without adequate precautions being taken by the lodges to see that the incomes of the parents or guardians are within the prescribed income limits, the following rules have been drawn up and have been sent to the Friendly Societies' Medical and Hospital Council.

1. Juvenile lodge members shall be accepted on doctors' lists at one-quarter the rate of adult male members.

2. Juvenile members shall be subjected to the usual medical examination before their names are accepted for medical service, and an examination fee of 5s. shall be charged if the member is not accepted.

3. Juvenile members will only be accepted for medical benefits when the combined income of their parents and/or guardians does not exceed £312 *per annum*, and they shall cease to be entitled to medical benefits when the combined income of parents and/or guardians exceeds £416 *per annum*.

A questionnaire has been sent to all country doctors regarding conditions of lodge practice. The number of replies received was gratifying.

Various matters brought forward by metropolitan and country members have been dealt with and recommendations made to the Branch Council.

Sections for Special Branches of Medical Knowledge.

Eye, Ear, Nose and Throat Section.

Inaugurated 1924. The following office-bearers were elected at the quarterly meeting held on March 15, 1933: *President*, Dr. Ernest Culpin (re-elected); *Vice-President*, Dr. Walter Crosse; *Councillor*, Dr. C. E. Wassell; *Auditor*, Dr. Geo. Thomson; *Secretary and Treasurer*, Dr. F. G. Meade.

Two meetings were held during the past year, and cases of special interest were shown and discussed.

Members of the Section also met the members of the Medical and Surgical Sections and took part in a debate on the "Dangers of Anæsthesia".

Surgical Section.

Inaugurated February, 1927. Meetings of this Section have been held at regular intervals during the year. The office-bearers for the current term are as follows: *President*, Dr. J. M. Thomson; *Honorary Secretary and Treasurer*, Dr. Alan E. Lee; *Committee*, Dr. Meyers, Dr. McLelland and Dr. Geaney.

The following papers were read to an average attendance of fifteen members: "The Treatment of Head Injuries", by Dr. Alan E. Lee; "The Technique and Results of Thyroidectomy", by Dr. E. D. Ahern; "Internal Derangements of the Knee Joint", by Dr. L. W. N. Gibson; and, in conjunction with the Medical Section and the Ear, Nose and Throat Section, a discussion on "Dangers of Anæsthesia" was held, with an attendance of twenty members.

The papers given were of a high standard and evoked keen discussion.

Obstetrical Section.

Inaugurated November, 15, 1927. The annual meeting was held January 31, 1933, Dr. L. W. Gall being in the chair and ten other members present.

The following were elected for the year: *President*, Dr. Kenneth Wilson; *President-Elect*, Dr. B. L. Hart; *Treasurer*, Dr. H. Stanley Waters; *Secretary*, Dr. L. H. Foote; *Statistical Committee*, Dr. R. G. Quinn, Dr. M. H. Elliot-Smith and Dr. L. H. Foote.

The retiring President, Dr. L. W. Gall, presented a paper, "Cæsarean Section: Its Indications".

Three other quarterly meetings were held with an average attendance of fourteen (14). At the first, held in conjunction with the Clinical Society of the Ipswich Hospital, there was a general discussion of case reports from the statistical records, the meeting following a dinner given to visiting members by the Ipswich members.

The second was combined with the Clinical Society of the Lady Bowen Hospital, when a demonstration of clinical cases was given.

At the third and last, a paper was presented by Dr. Bruce Mayes, "Obstetrical Problems", made up of a number of short discussions on subjects of interest.

The Committee is continuing to collect records from members and to prepare statistics, the number of cases reported to date being 2,720.

Medical Section.

Inaugurated June 1, 1928. *President*, Dr. S. F. McDonald; *Honorary Secretary*, Dr. T. H. R. Mathewson.

Two meetings of the Section were held during the year. On April 23, Dr. N. W. Markwell read a paper entitled, "The Changing Point of View in Heart Disease". On August 21, Dr. D. Gifford Croll read a paper entitled, "Some Aspects of the Treatment and Diagnosis of Diphtheria".

Both meetings were well attended and interesting discussions followed the reading of the papers.

Radiological Section.

Inaugurated March, 1930. *Chairman*, Dr. B. L. W. Clarke; *Honorary Secretary*, Dr. J. W. Heaslop. No meetings of the Section were held during the year.

Affiliated Local Associations.

Downs and South Western Medical Association.

This report covers the period from November, 1932, to the present date, our annual general meeting having been advanced in conformity with our official year which ends September 30.

The ten months have been crowded with many activities. Prominent amongst these have been the protracted negotiations with the Friendly Societies' Medical Institute of Toowoomba, and the affairs of the British Medical Association Contract Medical Service.

At a conference on November 19, 1932, between delegates from the British Medical Association Branch Council and representatives of the Friendly Societies' Medical Institute a basis of further negotiation was reached. The main points of this were approved at a meeting of this Local Association on November 24, and certain modifications

suggested. After several months of negotiation a definite agreement emerged between the British Medical Association Branch Council and the Institute.

This agreement is now in operation. It concedes the principle of the "Open Panel", with provisos for the protection of the lists of the present medical officers.

The affairs of the contract medical service have also demanded close attention. In April last the British Medical Association Branch Council requested that the Local Association take over the management and finance of the British Medical Association contract medical service. This step was finally taken on April 26.

The membership of the service has been well maintained, our present enrolment of financial members standing at as high a figure as it has ever done.

Before passing from the affairs of the contract medical service mention should be made of Dr. Price's courtesy in making freely available his rooms for the numerous meetings that have been held. We have also been greatly helped by the fact that Dr. Price has been simultaneously a member of our own executive and of the British Medical Association Branch Council, thus providing a valuable liaison at a time when such was of the greatest importance. Inasmuch as Dr. Price will, *ex officio*, continue to be a member of the central body during the ensuing year, the opportunity is offered us of continuing this close liaison, should this meeting see fit to do so, by keeping Dr. Price still a member of our own executive.

Turning now to the more general and routine activities of the Association, we recall with pleasure the visit of Dr. C. E. Corlette, of Sydney, in November last, at the time of the last annual general meeting. On this occasion Dr. Corlette gave an address on the subjects of "Hydatid Infestation in Man" and "Bone and Joint Injuries". His lectures, as on previous occasions, were much enjoyed and have been suitably acknowledged.

The meetings for the year have numbered nine to date. There have been two general, one special, and six monthly meetings. In addition there have been three meetings of the executive committee. The monthly meetings have proved a very successful series, being, on the whole, well attended, and an excellent spirit prevailed. Arrangements were made with the Toowoomba General Hospital authorities for the use of the board room for meetings and the courtesy thus extended by the board and the assistance given by the hospital staff have been greatly appreciated. In this connexion our thanks are due to Dr. Roberts for his help in facilitating the arrangements between the members and the board.

At four of the six monthly meetings lectures have been delivered by the following: Dr. Graham Sutton on "Renal Pain and Nephropexy", Dr. H. S. McLelland on "The Uses of Radium in Gynecology", Dr. L. W. N. Gibson on "Disabilities of the Knee Joint" and Dr. N. J. J. Nye on "Recent Advances in Medicine". Acknowledgements are due, not only to these gentlemen, but also to the Post-Graduate Course Committee of the Queensland Branch for their ready assistance in providing the lecturers and in contributing a large proportion of the expenses entailed in the visits. At another of the monthly meetings an evening was most profitably spent in hearing from Dr. J. E. F. McDonald, of Willowburn, a paper on "Insanity from the Asylum Point of View". Two very successful meetings were of a clinical nature, papers and demonstrations of cases being provided by some of the local members. There was, in addition, a special meeting held in August, when we had the pleasure of having as our guest Dr. Hipsley, of Sydney, who spoke on "Acute Osteomyelitis in Infants and Children".

The membership has been only moderately well maintained. There are 26 financial members on our list; the remaining 17 are unfinancial.

(Signed) A. D. McKENZIE, President.

J. G. MORRIS BEALE, Honorary Secretary.

Rockhampton Local Medical Association.

At the annual meeting the following office-bearers were elected for 1933: President, Dr. E. A. North; Vice-President, Dr. D. B. Walker; Honorary Secretary and Treasurer, Dr. J. Bruce Gordon.

A subcommittee of the Local Association drew up a scheme for the medical attendance at the Rockhampton Hospitals on the resignation of Dr. Walker. The Rockhampton Hospitals Board declined the offer and Dr. J. C. Ross was appointed Medical Superintendent. In consequence of the Hospitals Board's declining their offer all the local practitioners resigned their positions as honorary medical officers to the hospitals.

Minor lodge matters have received attention.

(Signed) J. BRUCE GORDON,

Honorary Secretary.

Bundaberg Local Medical Association.

No meetings were held during the year.

(Signed) EGDMONT SCHMIDT,

Honorary Secretary.

North Coast Medical Association.

Inaugurated November 26, 1932. Office-bearers for 1933-34: President, Dr. L. Morris (Gympie); Vice-President, Dr. F. J. Short (Nambour); Honorary Secretary and Treasurer, Dr. H. M. Saxby (Nambour).

The first year's activities of this Association may be regarded with satisfaction by all of us. All the practitioners resident in the area, except two, have joined the ranks and every member has taken an enthusiastic part in the activities.

The inaugural meeting of the Association was held at Nambour on November 26, 1932, when Dr. E. S. Meyers and Dr. Kenneth Wilson (President and Honorary Secretary respectively of the Queensland Branch) and Dr. S. F. McDonald (a member of the Branch Council) were present. At this meeting there were also present four visitors from Gympie and after discussion with them it was decided to invite the Gympie practitioners to join the North Coast Medical Association. This invitation was accepted and approved by the Branch. It has only been by the cordial and wholehearted support and cooperation of those northern members that the growth of the Association has been possible.

The next meeting was held at Gympie on March 25, 1933; again the President of the Branch (Dr. Alex. Murphy) was present, and Dr. Leslie Gibson, of Brisbane, added to the instructiveness of the proceedings.

The venue of the next meeting was Nambour on June 16, 1933, when Dr. E. S. Meyers and Dr. L. J. Jarvis Nye, both of Brisbane, were the principal speakers.

Today the fourth meeting was held at Gympie, and Dr. Neville Sutton's address was much appreciated.

During the year a constitution was drawn up by a sub-committee. This was subsequently adopted by a general meeting and approved by the Council of the Branch.

Membership of the Association stands at eighteen with ten honorary members. During the year three members have been lost, Dr. R. Williams, Dr. J. J. Stanley, and Dr. T. B. Law, on account of their removal from the area of the Association. These gentlemen we wish every success in their new spheres of activity. On the other hand Dr. L. L. Lovett and Dr. A. J. Parer are welcomed, and it is hoped that their stay in the district may be pleasant and profitable.

Thanks are due to those gentlemen who have, at no inconsiderable inconvenience, encouraged the Association, by their interest and instruction at the various meetings, and to those persons and authorities who have co-operated in making the first year a successful one. It is certain that as a result of the activities of the North Coast Medical Association, intraprofessional relationships have been strengthened, for the social side of the gatherings has been a by no means unimportant part, and the meetings have brought us both pleasure and profit.

For the future, care must be taken that enthusiasm does not wane and that the standard set by the first year is not only maintained but built on. One thing, to which serious attention must be given, is the matter of representation on the Branch Council; this is most desirable and would be of benefit to all concerned.

(Signed) F. J. SHORT,

President.

September 30, 1933.

The Post-Graduate Course, 1933.

In July of this year a new committee was appointed, consisting of representatives from the Branch Council, the Royal Australasian College of Surgeons, the Association of Physicians of Australasia and from the honorary staffs of the various metropolitan hospitals.

Personnel of the Committee: *Chairman*, Dr. S. F. McDonald; *Vice-Chairman*, Dr. A. V. Meehan; *Honorary Secretary-Treasurer*, Dr. L. W. N. Gibson; Dr. Alex. Murphy, Dr. E. S. Meyers, Dr. Neville Sutton, Dr. K. Wilson, Dr. Ellis Murphy, Dr. J. V. Duhig, Dr. C. E. Wassell, Dr. K. B. Fraser, Dr. R. E. Douglas, Dr. L. M. McKillop, Dr. F. W. R. Lukin, Dr. P. A. Earnshaw, Dr. H. J. Windsor, Dr. L. W. Gall, Dr. Elliot-Smith.

The annual post-graduate course was held during the last week in May. The membership of the course numbered 71 including eleven country members. Very interesting lectures were delivered by the visiting lecturers from Sydney, Dr. A. J. Aspinall, Dr. E. H. M. Stephen and Dr. K. Inglis.

In October the committee held its second annual refresher course which was eminently successful and much appreciated, especially by the country visitors. The number of members who availed themselves of the opportunity to attend the course was 44, including 14 from the country, some of the latter making long journeys from the far northern and western districts in order to attend the course.

Many visits were made by Brisbane lecturers, under the auspices of the post-graduate committee, to centres outside the metropolitan area, including Toowoomba, Ipswich, Nambour, Gympie and Lismore, these lectures being greatly appreciated by the various local members who attended.

Joseph Bancroft Memorial Lecture.

On June 2, 1933, Professor Harvey Sutton, of Sydney, delivered the Joseph Bancroft Memorial Lecture at the Geology Theatre of the University of Queensland, the title being "Modern Phases of Preventive Medicine". The attendance numbered 62, and in addition to the members of the Branch, invitations were issued to the Board of Faculties of the University and the Council of the Royal Society.

The Joseph Bancroft Memorial Medal was presented to the lecturer by the President.

Jackson Lecture.

Dr. R. W. Cilento delivered the third Jackson Lecture on Friday, September 1, at the British Medical Association Building. The title of the lecture was "Some Medical Aspects of Racial Resistance" and proved most interesting.

Federal Council.

The Federal Committee has now been replaced by the Federal Council of the Branches of the British Medical Association in Australia. The final meeting of the Federal Committee was held at Melbourne on March 6, 1933, and the first meeting of the new Federal Council took place at Sydney on August 28, 1933. The Branch was represented at both meetings by Dr. D. Gifford Croll and Dr. E. S. Meyers.

Reports of the proceedings of the meeting have been published in THE MEDICAL JOURNAL OF AUSTRALIA of March 25, 1933, and September 23, 1933.

Australasian Medical Congress (British Medical Association), Fourth Session, Hobart.

The Fourth Session of Congress will be held at Hobart, Tasmania, from January 15 to 20, 1934. Dr. Kenneth Wilson, the Honorary Secretary of the Branch, has been appointed Honorary State Secretary of Congress.

There is every prospect of a good enrolment of members from this Branch.

The Executive has appointed three presidents and eight vice-presidents of sections from Queensland.

British Medical Association Annual Meeting, Melbourne, 1935.

One of the greatest events in the history of the Association in Australia will be the annual meeting of the British Medical Association which is to be held at Melbourne in 1935.

An invitation has been extended to the Medical Secretary and visitors from overseas to come to Brisbane at this time, and a reply has been received to the effect that if it is at all possible they will do so.

Social.

On June 1, 1933, the annual dinner of the Branch was held at Rowe's Banquet Hall. The guests of honour included Professor Harvey Sutton and the southern visitors who were in Brisbane in connexion with the post-graduate course.

Dr. Alex. Murphy, President of the Branch, also entertained the southern visitors and members of the Council at dinner at the Belle Vue Hotel, prior to the Bancroft Lecture on Friday, June 2.

Congratulations.

The congratulations of the Branch have been tendered to the following:

Dr. G. C. Anderson on his appointment to the position of Medical Secretary of the British Medical Association.

Sir John McKelvey on the honour conferred upon him by His Majesty the King.

Professor R. Marshall Allan on his appointment as an Honorary Fellow of the American College of Surgeons.

ALEX. MURPHY, President.

KENNETH WILSON, Honorary Secretary.

FINANCIAL STATEMENTS.

The Honorary Treasurer presented the financial statements, which were adopted on his motion, seconded by Dr. W. N. Robertson. The financial statements are published herewith.

ELECTION OF OFFICE-BEARERS.

The President announced the result of the election of office-bearers and members of the Council.

President: Dr. Thomas A. Price.

President-Elect: Dr. W. N. Robertson.

Past President: Dr. Alex. Murphy.

Honorary Secretary: Dr. Kenneth Wilson.

Councillors: Dr. Gavin H. Cameron, Dr. D. Gifford Croll, Dr. J. Grahame Drew, Dr. F. W. R. Lukin, Dr. N. W. Markwell, Dr. S. F. McDonald, Dr. E. S. Meyers, Dr. Ellis Murphy, Dr. Mervyn S. Patterson, Dr. R. G. Quinn, Dr. M. Graham Sutton, Dr. Neville G. Sutton, Dr. D. E. Trumpy, Dr. J. G. Wagner.

On the motion of Dr. M. G. Sutton, seconded by Dr. W. N. Robertson, Mr. Roy G. Groom was appointed auditor.

PRESIDENT'S ADDRESS.

The incoming President, Dr. T. A. Price, read his address (see page 1).

INDUCTION OF PRESIDENT.

Dr. Alex. P. Murphy then inducted the new President, Dr. T. A. Price, to the chair.

Dr. T. A. Price thanked the members and said that he appreciated very fully the honour they had conferred upon him. He sincerely hoped he might be of some service to the Association. He realized that his appointment had a deeper meaning than a purely personal one. His colleagues on the Downs and throughout the extra-metropolitan areas of Queensland could see that the Queensland Branch of the British Medical Association was a Queensland branch and not a metropolitan branch. Its interests were spread over the whole of Queensland, and

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Statement of Receipts and Payments (General Fund) for Twelve Months ended November 15, 1933.

RECEIPTS.		PAYMENTS.	
£	s. d.	£	s. d.
November 16, 1932—			
To Cash at English, Scottish and Australian Bank Limited, Brisbane	598 10 1	By British Medical Association, London—Amounts placed on Fixed Deposit at English, Scottish and Australian Bank, Limited, Brisbane, on account of Subscriptions, 1932 and 1933 ..	593 4 3
„ Cash in hand	6 1 0	„ Australasian Medical Publishing Company, Limited—Payments on account of THE MEDICAL JOURNAL OF AUSTRALIA, 1932 and 1933..	585 7 6
November 15, 1933—			
To Subscriptions—			
For remittance to British Medical Association, London	613 5 6	„ Library Expenditure	63 19 8
For remittance to the MEDICAL JOURNAL OF AUSTRALIA, Sydney	604 2 6	„ Branch Expenses—	
Queensland Branch Subscriptions	277 3 0	Office Salaries and Honoraria ..	386 17 4
Organization Fund, Queensland Branch	779 17 9	Printing and Stationery	42 15 6
	2,274 8 9	Electric Light	17 15 3
„ Subscriptions to Annual Dinner Account	34 10 0	Rent	52 0 0
„ Sundry Receipts	3 0 0	Cleaning	43 1 3
„ Australasian Medical Publishing Company, Limited—Cash Payment on account Interest on Debentures, three years to June 30, 1933	9 2 6	Telephone	22 2 4
		Bank Charges	£8 18 7
		Less Exchanges Re-funded	5 15 0
			3 3 7
		Stamps and Telegrams	50 11 6
		Audit Fees and Accountants' Services to November 15, 1932	12 12 0
		Insurance, Fire and Workers' Unemployment and Compensation	6 11 0
		Legal Costs re Toowoomba Institute et cetera	9 9 0
		Renewals and Repairs, Office Furnishings and Electric Light	8 7 0
		Council and General Meeting Expenses, Newspapers and Sundries	18 3 10
		Contribution to Federal Committee	24 18 0
		Expenses of Delegates to Federal Committee	16 11 3
			714 18 10
		„ Expenses in connexion with British Medical Association Contract Medical Service, Toowoomba ..	38 18 8
		„ Annual Dinner Expenditure ..	33 16 3
		„ Cash at English, Scottish and Australian Bank, Limited, Brisbane	891 10 2
		„ Cash in hand	3 8 0
			£2,925 12 4
	£2,925 12 4		

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Building Fund Statement of Receipts and Payments for Twelve Months ended November 15, 1933.

RECEIPTS.		PAYMENTS.	
£	s. d.	£	s. d.
November 15, 1933—			
To Rent from "Bayview," Wickham Terrace ..	284 0 0	November 16, 1932—	
„ Queensland Medical Land Investment Company, Limited—Dividend, 12 months ended November 25, 1932	118 2 6	By English, Scottish and Australian Bank, Limited Brisbane—Debit Balance ..	1,508 6 0
„ English, Scottish and Australian Bank, Limited, Brisbane—Debit Balance	1,567 12 6	November 15, 1933—	
	£1,969 15 0	By Rates, Land Tax, Insurance and Repairs, "Bayview"	153 16 1
		„ Interest	291 4 7
		„ Sundry Expenses	16 8 4
			£1,969 15 0

Building Fund Revenue Account for Twelve Months ended November 15, 1933.

EXPENDITURE.						INCOME.					
	£	s.	d.	£	s.		£	s.	d.	£	s.
November 15, 1933—						November 15, 1933—					
To Rates, Land Tax, Insurance and						By Rent from "Bayview"	284	0	0		
Repairs "Bayview"	153	16	1			" Queensland Medical Land Investment					
" Interest on Bank Overdraft and on						Company, Limited—Dividend ..	118	2	6		
Loans from Members	289	17	10							402	2
" Sundry Expenses	16	8	4			Deficit transferred to Accumulation					
				460	2	Account				188	19
" Depreciation, "Bayview," Buildings											
and Furniture				131	0						
				£591	2					£591	2
				3						3	

it stood for the widest possible usefulness to Queensland as well as for the welfare of every medical man in the State. Quite a number of medical men took no interest in the Association, and some of them wanted to know of what use the British Medical Association was to them. A man who asked that question had no vision; he did not understand where he would be but for the British Medical Association. After all, the Association, good or bad, was what the members made it. A fair question to ask any member was not what had the British Medical Association done for him, but what had he done for it.

VOTES OF THANKS.

On the motion of Dr. Alex. P. Murphy, a vote of thanks was accorded to the Honorary Secretary, Dr. Kenneth Wilson, and to the Secretary, Mrs. Spooner.

Dr. T. A. Price moved a vote of thanks to Dr. Alex. P. Murphy for his work during the past year. This was carried with acclamation.

Dr. Alex. P. Murphy thanked the members. He thanked the Council for their support during the year and voiced a personal tribute to Dr. Meyers as a Past President. Dr. T. A. Price then introduced Dr. W. N. Robertson as President-Elect.

Public Health.

NEW SOUTH WALES COUNCIL FOR MENTAL HYGIENE.

THE second annual meeting of the Council for Mental Hygiene for New South Wales was held at the British Medical Association House, 135, Macquarie Street, Sydney, November 30, 1933, PROFESSOR HARVEY SUTTON, the President, in the chair.

Professor Harvey Sutton referred to the greater attention to environment brought about through various public health acts, which aimed at the organized control of mankind over his surroundings. At the same time much of the improvement in public health had been brought about through education rather than through legislation. He said that they still had to deal with the problem of loss of efficiency, both at school and in industry, due to the various forms of mental and physical incapacity which went by the name of neurasthenia. Chronic fatigue and instability at school resulted from unhygienic modes of living including vitamin deficiency which, though not assuming gross forms, might still lower the resistance of the nervous system to various stresses. Professor Sutton referred briefly to the activities of the Council during the past year, including the work of the Subcommittees on Criminality and Delinquency, Mental Deficiency and Child Guidance.

Election of Office-Bearers.

The following officers were reelected:

President: Professor Harvey Sutton.

Vice-Presidents: Judge W. Bevan, Dr. C. A. Hogg, Mrs. M. Muscio.

Honorary Treasurer: Mr. L. M. Phillips.

Honorary Secretary: Professor W. S. Dawson.

Executive Committee: The President, Vice-Presidents, Honorary Treasurer, Honorary Secretary, Mr. S. Ebsworth, Dr. Evan Jones, Dr. O. Latham, Mr. V. J. R. Miles, Dr. H. M. North, Dr. C. K. Parkinson, Dr. E. H. M. Stephen, Mr. A. Thompson, Dr. J. A. L. Wallace.

Criminality and Delinquency.

His Honor Judge Bevan reported on the work of the Criminality and Delinquency Subcommittee.

He explained that in order to make some practical suggestions it had been decided to confine the attention of the subcommittee to a type of prisoner who was quite unfitted to ordinary gaol discipline and routine, and who was a constant source of trouble both as an instigator of mischief and as the tool of other prisoners. This class of individual, while being subnormal mentally, did not ordinarily become subject to be dealt with under the present lunacy laws of New South Wales. Until a mental deficiency bill became law the subcommittee were of opinion that a beginning might be made with the problem if special provision were made for the mentally deficient criminal. The subcommittee had thereupon drafted a bill providing for the thorough examination by two qualified medical practitioners of any prisoner who had on two occasions been convicted of certain scheduled offences and who was believed to be mentally deficient. If the medical practitioners reported that such prisoner was mentally defective, he was then to be brought before a magistrate who, if he were of the like opinion, would make an order for his detention in an institution for the reception of mental defectives during the Governor's pleasure. Provision was made for the right of appeal by the prisoner against this order.

Suitable accommodation could be provided at Long Bay Penitentiary, and certain buildings could be altered with very little expense, so that only the approval of Parliament stood in the way of carrying out these proposals.

It was thereupon resolved that the bill be approved by the Council and that appropriate action be taken to bring it under the notice of the Minister or Ministers concerned.

Post-Graduate Work.

POST-GRADUATE COURSE IN TUBERCULOSIS.

A SPECIAL post-graduate course in tuberculosis will be held in Sydney just prior to Easter, 1934. The course will commence on Wednesday, March 21, and conclude on Wednesday, March 28. Lectures and demonstrations will be held at the Royal Prince Alfred Hospital, Waterfall Sanatorium, The Coast Hospital Auxiliary, Randwick, The National Association, the Royal Alexandra Hospital for Children, the Sydney Hospital, and the Royal North Shore Hospital of Sydney. Lectures and cinematograph demonstrations will also be given at the British Medical Association House. The course has been planned to give a complete review of the diagnosis and treatment of tuberculosis in all its aspects.

The fee will be £3 3s. Those desiring to take the course should register their names with the Honorary Secretary, New South Wales Permanent Post-Graduate Committee, 225, Macquarie Street, Sydney, immediately, as the list will be closed as soon as twenty applications have been received.

Obituary.

WAHAB McMURRAY.

THE following account of the life of the late Dr. Wahab McMurray has been written by Dr. Ralph Worrall.

In the death of Wahab McMurray on November 5 the State has lost a distinguished citizen, the profession a cultured physician, and his intimates a loyal friend.

Born in the manse at Waringstown, near Belfast, the son of a Presbyterian minister, Dr. McMurray was educated in Queen's College, Belfast, where he won two exhibitions and many prizes, so that to a great extent he was able to relieve his father of the expenses of his medical course.

The final for the M.D., M.Ch. degrees was passed in 1881 in the "Recommended for Honours" division. After doing some dispensary work in Ireland, he came to Australia forty-seven years ago and took up practice at Walgett. Shortly after he became assistant to the late Dr. George Marshall at Lyons' Terrace, Sydney, and on the death of this gentleman entered into partnership with his son, Dr. Hamilton Marshall, who remained his friend and physician to the last. Directly he had saved a little money he journeyed to America, London and Europe to study skin diseases. On his return he was appointed to the newly created dermatological department at the Sydney Hospital, the high repute of which must be credited to the knowledge and enthusiasm of Wahab McMurray. In recognition the Board of Directors of the Sydney Hospital has named the skin ward "The W. McMurray Ward for the Diseases of the Skin". At the Coast Hospital also he gave devoted and invaluable service.

He was a pioneer in the therapeutic use of X rays, and suffered, like other early workers in this field, terrible effects from the then unrevealed dangers attached to the

use of this lethal agent. Dr. McMurray came of a healthy and long-lived race, the breakdown in his health during the last ten years of his life and the retinal hemorrhages eventually leading to total blindness, as well as the mutilations which he suffered, constitute the martyrdom of a leader into uncharted seas.

During the war Dr. McMurray unhesitatingly threw up his practice to take charge of Milson Island venereal disease depot. Here he exhibited administrative talents of a high degree and speedily changed chaos into order. Arriving just as a man had been killed, his firmness, tact and genuine sympathy speedily won over even the unruly elements. His great services to the State in this phase of his life have never been adequately recognized or acknowledged.

As a man Dr. McMurray was conscientious, kindly and generous, and no member of an honorary medical staff ever observed to a greater degree the golden rule: "To do as one would be done by."



Medical Practice.

A MACHINE FOR ARTIFICIAL RESPIRATION.

DURING 1932 the Commonwealth Government decided to purchase for trial and demonstration purposes a machine for artificial respiration for use in cases of infantile paralysis. Dr. Jean Macnamara, of Melbourne, was then in America, and she investigated the various types of machines on the market in the United States of America and Canada. On Dr. Macnamara's recommendation, it was decided to purchase the Adams machine made by the Acme Vacuum Cleaner Company of Montreal, Canada. It was intended that the machine would be installed for use and to serve as a

demonstration model at the Children's Hospital, Melbourne. At that time, however, the Melbourne Rotary Club generously placed at the disposal of the Children's Hospital sufficient funds to purchase a respirator of the same type. It was then decided that the Commonwealth machine should be installed at another hospital, and, on arrival of the two machines in October last, this machine was re-shipped to Sydney and installed at the Royal Alexandra Hospital for Children, Sydney.

A separate room has been there set aside for the respirator, which is now fully assembled and ready for emergency work at any moment. No difficulty was experi-

enced and both electrical and emergency hand mechanism were put into immediate working order. Assistance in adjusting the machine and in the preliminary trials was given by Professor Davies, of the Physiological Department, University of Sydney. Several resident medical officers have been trained in its use, and one of them is available at any hour of the day or night.

In accordance with the original intention of the Commonwealth Government that the fullest use should be made of the machine, the Chief Executive Officer of the Royal Alexandra Hospital for Children has proposed that all the other metropolitan hospitals should be advised that such a machine is available, and that the Royal Alexandra Hospital will be willing to receive and treat immediately any case considered suitable for and requiring the treatment. The machine is full sized and not restricted to use for children, and several full-sized beds have been made available for accommodation for after-treatment. In addition to the use of the machine in cases of respiratory failure in poliomyelitis, conditions which might benefit by the treatment include electric shock and carbon monoxide and deep narcotic poisoning with respiratory failure.

The respirator is the property of the Commonwealth Department of Health, and, in placing it at the Royal Alexandra Hospital, the Director-General of Health desired not only that it should be available for the immediate treatment of patients, but that the demonstration of its utility should induce other hospitals to instal similar respirators wherever they are necessary.

Correspondence.

EPITHELIOMA OF THE LIP.

SIR: Your leading article on "Epithelioma of the Lip" in the November 25 issue of the journal, contains valuable information and fills a long needed summary on the subject.

It has been well known for many years that the simple local removal of certain epitheliomata of the lip has resulted in lasting cures, and many leading British surgeons of the last decade, led by Mr. Wilfred Trotter, have advocated and practised non-interference with the gland-bearing area in cases where no glands are palpable. I think surgeons today should go one step further and ask themselves: What are the types of growths of the lip that give bad prognoses? Most of the warty and scaly conditions on the lips are either hyperkeratoses (simple precancerous) or first grade cancers (Broder's classification). In these types the results obtained by any reasonable line of treatment to the local condition are almost 100% cure. When the surgeon knows he is dealing with this class of case, there is no necessity, unless the glands are already involved in the latter instance, to interfere with the gland bearing area at all. It is when we come to the more malignant types of epithelioma of the lip that we are more likely to get recurrences or metastases or both, even in some instances in spite of most thorough treatment.

I have had sufficient experience with radium treatment of cancer of the lip to state that no local growth need be cut out with the knife. In order to classify the growth it is only necessary to remove a small section after radium has been implanted.

Although nowadays we consider that the aetiological factor of clay pipe smoking is almost negligible, we must recognize that in some people there is a definite association between cigarette and pipe smoking and cancer of the lip, and it is surprising how often one encounters the white patches on the lips of cigarette smokers, particularly of those who allow the cigarette to "hang" on the lower lip. Heat and the products of incomplete combustion from cigarette smoking seem to be undoubted causes of irritation which in some people eventually may produce malignant disease of the lip. I think that most surgeons

can show results at least equal to those quoted by Dr. Gretta Thomas in her report. We should aim, however, at obtaining results better than these, and we should avoid mutilating operations unless they are definitely indicated. At any rate, the amount of our surgical interference should depend in a great degree upon the grade of the cancer and in those cases of highest grade, where the glands are already involved, it is perhaps better to follow some palliative treatment other than surgery which in such instances, if it is to be used at all, must be drastic and mutilating.

Dr. Val McDowall, Honorary Radium Therapist of the Cancer Clinic at the Brisbane General Hospital, has supplied me with the following figures, and I have his permission to quote them here. They will serve to emphasize some of the points I have endeavoured to stress, one of which is that better results can reasonably be expected than were obtained at the General Infirmary at Leeds during the period quoted.

From the foundation of the Cancer Clinic in 1928 to June, 1932, that is, three and a half years, 162 patients with epitheliomata of the lip were treated. Included in this number is a group of advanced and "derelict" cases taken over at the formation of the service.

One hundred and twenty-five of these patients are alive and well, ranging from four and a half years down to about one and a half years' freedom from symptoms. Fourteen could not be traced. Six died of intercurrent disease. Nine died from recurrence and metastases. Eight are alive, but have recurrences.

Thirty-nine patients had radium by external application only. One of these had external radium application as a palliative only. The remainder were classified as early cases. Thirty-three of these patients are alive and well. Four cannot be traced. One died of intercurrent disease. One, the hopeless case, died in due course.

Seventeen high grade cases, six of which were considered as operable cases under surgical standards, were treated by radium, and all but one by surgery to glands of neck in addition. Only eight of these are alive and well.

One hundred and sixteen were treated with radium implantation, but no surgery. Eighty-eight of these were classified as operable under surgical standards. The remainder were higher grades of severity. Eighty-four are alive and well. Eight died of metastases or have recurrences. Nine cannot be traced. Nine show local improvement. The remainder died of intercurrent disease.

The percentage of good results obtained nowadays in this class of case is an improvement upon that obtained by the use of the knife alone. It is, however, still far from satisfactory in the higher grades of malignancy in spite of the recent combined methods of attack. Fortunately, these higher grades are in the minority.

Yours, etc.,

R. GRAHAM BROWN.

Equitable Life Building,
Queen Street,
Brisbane.

December 1, 1933.

TREATMENT OF URETHRAL STRICTURE AND OF INTESTINAL OBSTRUCTION.

SIR: In the journal of November 25, articles appear on these subjects, and I should be glad of the opportunity to comment thereon.

With regard to stricture it was surprising to me that, although internal and external urethrotomy were described, excision was referred to as really an operation for the expert and comparatively rarely required.

Now, in my opinion, if the operation of excision devised by the late Hamilton Russell were properly appreciated, both internal and external urethrotomy would become obsolete.

He described his method in *The British Journal of Surgery*, Volume VII, 1915. Shortly it consists of laying

open the urethra from well in front to well behind the stricture, converting the urethral tube into a "tape", as he describes it. Retraction sutures are passed through the edge of the healthy urethra, one on each side, in front and behind the stricture. The constricted portion of the urethra, with the underlying scar tissue, is then freely excised and the cut ends of the "tape" brought together after undermining, if necessary, to avoid tension. A few mattress sutures of fine twenty-day gut, which are tied not too tightly, serve best to bring the ends together.

No other suturing is necessary, excepting one to fix the soft catheter, which is carefully passed and left in the bladder for a few days.

In one portion of his summary, Hamilton Russell wrote that the operation was indicated in "all cases of stricture that are not easily managed by dilatation". In another part he says: "It will thus be seen that the operation, in my opinion, should entirely supersede both internal and external urethrotomy as now performed."

With these views I am completely in agreement. I have no confidence that a permanent cure will result from a simple linear division of the stricture.

On the other hand, my experience with this method of excision has been most satisfactory. Cure is usually rapid, comfortable and permanent after this operation, which is quite as simple and safe as a urethrotomy.

With regard to intestinal obstruction and its treatment. I should like to advocate one simple measure which I consider of great value in addition to those mentioned by the various speakers. This is the injection of about three ounces of castor oil into the bowel after relief of the obstruction and evacuation of accumulated fluid in the intestine. This will save a lot of anxiety and trouble after the operation, and may often be the deciding factor in the patient's recovery.

To carry it out without loss of valuable time, a little preparation is necessary beforehand. The oil has to be procured and arrangement made to heat it in order to make it thinner. Standing it in hot water comfortably bearable to the hand will suffice. Then an extra large serum needle is necessary for rapid and easy injection of the oil.

The needle is passed through the bowel wall as obliquely as possible in order to prevent any subsequent leakage. This can be further guarded against by a suture of fine catgut.

This chance, before closing the abdomen, of getting a large dose of oil with certainty to the spot where it will be much needed, is too good to be missed, even at the expense of a little delay in the completion of the operation.

Yours, etc.,

"GEN. SURG."

Sydney,

December 11, 1933.

A CENTRAL MALARIA LIBRARY.

Six: A malaria library was founded in Rome by the Stazione Sperimentale per la Lotta Antimalarica in 1925, and an "Index to Malaria Literature" is issued annually by the station.

To make this as complete a central malaria library as possible, we appeal to all malarialogists to send us books, reports and articles on malaria.

Photostat copies of any articles in the library can be had, on request, at cost production.

All publications and requests should be addressed to "The Director, Stazione Sperimentale per la Lotta Antimalarica, Corso Vittorio Emanuele 168, Rome (16)".

Yours, etc.,

A. MISSIROLI,

The Director,

Stazione Sperimentale per
la Lotta Antimalarica.

Undated.

The Royal Australasian College of Surgeons.

PRIMARY FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Censor-in-Chief of the Royal Australasian College of Surgeons has been informed by the Secretary of the Royal College of Surgeons of England that an examination for the Primary Fellowship of that College will most probably be held in Australia in November, 1934, and in New Zealand in December, 1934.

Congress Notes.

AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

THE Executive Committee of the Fourth Session of the Australasian Medical Congress (British Medical Association) has received an application for membership of Congress from Dr. Henry Cordner, Federal Street, Hobart. The nomination is signed by Dr. Stuart Gibson and by Dr. W. L. Crowther.

Proceedings of the Australian Medical Boards.

VICTORIA.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Act, 1928*, of Victoria, as legally qualified medical practitioners:

Hayward, John Isaac, M.B., B.S., 1933 (Univ. Melbourne), 25, Prospect Hill Road, Camberwell, E.6.

Holdsworth, William Goldthorpe, M.B., B.S., 1933 (Univ. Melbourne), Baptist College, North Melbourne.

Hooper, Reginald Smythe, M.B., B.S., 1933 (Univ. Melbourne), "Craigie Lea", Mornington.

Kelly, Anthony Richard Kevin, M.B., B.S., 1933 (Univ. Melbourne), 4, Summerland Mansions, Fitzroy Street, St. Kilda.

Kidd, David Alan, M.B., B.S., 1933 (Univ. Melbourne), 38, Peel Street, Windsor, S.1.

Langley, Eric Francis, M.B., B.S., 1933 (Univ. Melbourne), McCrae Street, Dandenong.

Laurie, Henry William Spalding, M.B., B.S., 1933 (Univ. Melbourne), Sefton Place, East Camberwell, E.6.

Lawson, Donald Forsyth, M.B., B.S., 1933 (Univ. Melbourne), 336, Barker Street, Castlemaine.

Manson, Clement Polson, M.B., B.S., 1933 (Univ. Melbourne), "Allandale", Melton South.

Marks, Charles Ferdinand, M.B., B.S., 1933 (Univ. Melbourne), "Cooreelah", Roberts Street, Toowong, Queensland.

Macdonald, Ian Campbell, M.B., B.S., 1933 (Univ. Melbourne), 5, Mitchell Grove, East Coburg, N.13.

MacDougall, Russell Angus, M.B., B.S., 1933 (Univ. Melbourne), 15, Powlett Street, Heidelberg, N.22.

Palandri, John Dominic, M.B., B.S., 1933 (Univ. Melbourne), Newman College, Carlton, N.3.

Phelan, David Beattie, M.B., B.S., 1933 (Univ. Melbourne), 80, Glyndon Road, Camberwell, E.6.

Sinclair, Alexander John Maum, M.B., B.S., 1933 (Univ. Melbourne), 61, Alma Road, St. Kilda, S.2.

Sinn, Henry James, M.B., B.S., 1933 (Univ. Melbourne), Newman College, Carlton, N.3.

- Smith, Frederick Perceval Goddard, M.B., B.S., 1933 (Univ. Melbourne), 19, Nott Street, East Malvern, S.E.5.
 Smithers, Warwick McLean, M.B., B.S., 1933 (Univ. Melbourne), 95, Normanby Road, Kew, E.4.
 Staricoff, Mendel, M.B., B.S., 1933 (Univ. Melbourne), 44, First Avenue, Mt. Lawley, Western Australia.
 Stevens, James Sydney Tod, M.B., B.S., 1933 (Univ. Melbourne), 216, Auburn Road, Hawthorn, E.2.
 Trahair, Geoffrey, M.B., B.S., 1933 (Univ. Melbourne), 69, Moreland Road West, Brunswick, N.10.
 Wallace, Edgar Charles Moreland, M.B., B.S., 1933 (Univ. Melbourne), 13, Bendigo Avenue, Elwood, S.3.
 Watters, George Graham, M.B., B.S., 1933 (Univ. Melbourne), 33, Broadway, Camberwell, E.6.
 Webb, Richard Ramsay, M.B., B.S., 1933 (Univ. Melbourne), 414, St. Kilda Road, Melbourne, S.C.2.

Books Received.

- ANNALS OF ROENTGENOLOGY: A SERIES OF MONOGRAPHIC ATLASES, edited by J. T. Case; Volume XV: Nasal Accessory Sinuses, by F. M. Law, M.D.; 1933. New York: Paul B. Hoeber. Demy 4to., pp. 239. Price: \$10.00 net.
 AIDS TO PUBLIC HEALTH, by W. G. A. Robertson, M.D., D.Sc., D.Litt., F.R.C.P.E., Barrister-at-Law; Third Edition; 1933. London: Baillière, Tindall and Cox. Foolscap 8vo., pp. 208. Price: 3s. 6d. net.
 THE PHYSICIAN'S ART: AN ATTEMPT TO EXPAND JOHN LOCKE'S FRAGMENT DE ARTE MEDICA, by A. G. Gibson; 1933. Oxford: The Clarendon Press. Crown 8vo., pp. 237. Price: 7s. 6d. net.
 GREAT DOCTORS: A BIOGRAPHICAL HISTORY OF MEDICINE, by H. E. Sigerist, M.D., translated by E. and C. Paul; 1933. London: George Allen and Unwin, Limited. Demy 8vo., pp. 436, with illustrations. Price: 15s. net.
 PRACTICAL MEDICINE SERIES: THE 1933 YEAR BOOK OF GENERAL MEDICINE; 1933. Chicago: The Year Book Publishers. Crown 8vo., pp. 831.
 PRACTICAL DIETETICS, WITH REFERENCE TO DIET IN HEALTH AND DISEASE, by A. F. Pattee; Nineteenth Edition; 1933. New York: A. F. Pattee; Australia: Angus and Robertson. Crown 8vo., pp. 869. Price: 17s. 6d. net.
 A HANDBOOK OF PSYCHIATRY, by J. H. Ewen, M.R.C.P., D.P.M.; 1933. London: Baillière, Tindall and Cox. Demy 8vo., pp. 275. Price: 12s. 6d. net.
 INTRODUCTION TO PHYSICAL CHEMISTRY, by A. Findlay; 1933. London: Longmans, Green and Company. Demy 8vo., pp. 499, with illustrations. Price: 7s. 6d. net.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants locum tenentes sought, etc., see "Advertiser", pages xvi, xvii and xviii.

- AUSTIN HOSPITAL FOR CANCER AND CHRONIC DISEASES, HEIDELBERG, VICTORIA: Resident Medical Officer.
 CHILDREN'S HOSPITAL, CARLTON, VICTORIA: Resident Registrar, Assistant Resident Medical Officers.
 GRESSWELL SANATORIUM, MONT PARK, VICTORIA: Resident Medical Officer.
 LAUNCESTON PUBLIC HOSPITAL, LAUNCESTON, TASMANIA: Resident Medical Officer.
 MANLY DISTRICT HOSPITAL, SYDNEY, NEW SOUTH WALES: Resident Medical Officer.
 NEW SOUTH WALES MASONIC HOSPITAL, SYDNEY, NEW SOUTH WALES: Resident Medical Officer.
 PERTH HOSPITAL, PERTH, WESTERN AUSTRALIA: Junior Resident Medical Officers.
 QUEEN VICTORIA MEMORIAL HOSPITAL, MELBOURNE, VICTORIA: Medical Superintendent (female).
 ROYAL NORTH SHORE HOSPITAL OF SYDNEY, NEW SOUTH WALES: Honorary Officers.
 SYDNEY HOSPITAL, SYDNEY, NEW SOUTH WALES: Junior Resident Pathologist.
 THE AUSTRALIAN INLAND MISSION, SYDNEY, NEW SOUTH WALES: Medical Officer.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association, Ashfield and District United Friendly Societies' Dispensary, Balmain United Friendly Societies' Dispensary, Friendly Society Lodges at Casino, Leichhardt and Petersham United Friendly Societies' Dispensary, Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney, North Sydney Friendly Societies' Dispensary Limited, People's Prudential Assurance Company Limited, Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries, Australian Prudential Association, Proprietary, Limited, Mutual National Provident Club, National Provident Association, Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane Associated Friendly Societies' Medical Institute, Chilgrove Hospital, Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL are advised, in their own interests, to submit a copy of their agreement to the Council before signing, Lower Burdekin District Hospital, Ayr.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	Combined Friendly Societies, Clarendon and Kangarilla districts, All Lodge Appointments in South Australia, All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 205, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

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